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EDITED BY

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HE PRAYETH BEST WHO LOVETH BEST
ALL THINGS BOTH GREAT AND SMALL;
FOR THE DEAR GOD WHO LOVETH US,
HE MADE AND LOVETH ALL.

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Nature Notes:

The Selborne Society's Magazine.

No. 181. JANUARY, 1905. Vol. XVI.

OBJECTS OF THE SOCIETY.

To promote the study of Natural History. To preserve from needless destruction such wild animals and plants as are harmless, beautiful, or rare. To discourage the wearing and use for ornament of: (1) The skins and furs of such animals as are in danger of being exterminated; (2) the skins and plumage of such birds as are not domesticated. To protect places and objects of natural beauty or antiquarian interest from ill-treatment or destruction. To afford facilities for combined effort in promoting any of the above or kindred objects.

RULES OF THE SELBORNE SOCIETY.

Brought into force February 22, 1904. *Rule II.* (*c*) (2) *was emended, November* 22, 1904.

In order that they may be on permanent record for the use of Members, these amended Rules are published in the Magazine by direction of the Council.

I.—The Society shall be called "The Selborne Society."

II.—The objects of the Society shall be:—

(*a*) To promote the study of Natural History.

(*b*) To preserve from needless destruction such wild animals and plants as are harmless, beautiful, or rare.

(*c*) To discourage the wearing and use for ornament of:—(1) the skins and furs of such animals as are in danger of being exterminated, and (2) the skins and plumage of such birds as are not domesticated.

(*d*) To protect places and objects of natural beauty or antiquarian interest from ill-treatment or destruction.

(*e*) To afford facilities for combined effort in promoting any of the above or kindred objects.

III.—All persons who are willing to promote the objects of the Society may become Members or Adherents, on approval by the Council, or by the Committee of a Branch.

IV.—The Council shall have power to remove Members or Adherents from the list without assigning a reason therefor.

V.—The Annual Subscription payable by Members shall not be less than Five Shillings, which will entitle them to hold office, vote at General Meetings, and receive the Society's Annual Report and its Magazine (NATURE NOTES). Members may substitute one Life Payment of Five Guineas for the Annual Subscription, such payment to be invested for the benefit of the Society.

VI.—The Annual Subscription payable by Adherents shall not be less than One Shilling; such Adherents shall not be entitled to vote at meetings, hold office nor to receive the Magazine, but may attend the meetings of the Field Club and shall receive the Annual Report.

VII.—The Officers of the Society shall be a President, Two Trustees, Vice-Presidents, Chairman of Council, Treasurer, Secretary, Editor of Magazine, Librarian, and Twelve Councillors.

VIII.—The Council of the Society shall consist of the Chairman, six Vice-Presidents (nominated by the Council), Treasurer, Secretary, Editor of Magazine, Librarian, and twelve Councillors, together with Representatives chosen annually by the Branches.

IX.—The President, Trustees, Vice-Presidents, and Councillors shall be elected by the Members at the Annual General Meeting, and, excepting the Trustees, shall hold office for one year. The Trustees, after their election, shall hold office so long as they shall remain Members of the Society.

X.—The Chairman of Council, Treasurer, Secretary, Editor, and Librarian shall be elected by the Council, hold office for one year, and be eligible for re-election.

XI.—The Members of the Council shall attend not less than one-third of the meetings of the Council held during the year, and failing this shall not be eligible for re-election for one year.

XII.—One Member may hold two offices in the Society.

XIII.—The Council shall have full control over, and management of, the affairs of the Society, shall have power to make regulations for that purpose, provided that nothing inconsistent with these rules is done thereby, and to fill up vacancies in its number.

XIV.—All investments on behalf of the Society shall be made in the name of the Trustees, and all the documents relative thereto, including the securities themselves, shall be held by the Trustees. Such investments shall be dealt with by them on a specific resolution of the Council, and not otherwise.

XV.—The Secretary shall have charge of the funds applic-

able to current expenses; shall keep the accounts of the Society, and present at the Annual General Meeting a statement of accounts. The Treasurer shall make payments only on th order of the Council.

XVI.—A member shall, *ipso facto*, cease to be a member on :—

(*a*) Neglecting for four months, after notice in writing has been sent to the last known address, to pay the the Annual Subscription, or :—

(*b*) Refusing to pay any other moneys that may be due, and have been duly demanded.

Any Member intending to withdraw from the Society must pay all arrears, whether of subscription or otherwise, and must give notice in writing to the Secretary of the Society, or to the Honorary Secretary of the Branch to which he or she is attached, on or before December 1, otherwise such members will be liable for the next year's Subscription. The Subscriptions of Members shall be due on January 1 in each year, and shall be payable in advance. The Subscription of those admitted during the last quarter of the year will date from January 1 following, but will be payable at the time of election. No person shall be entitled to the privileges of membership until the first subscription has been paid.

XVII.—The Meetings of the Council shall be held at such times as the Council shall direct, but not less than four meetings shall be held during the year. Five Members shall form a quorum.

XVIII.—Except upon a resolution of Council no special motion shall be brought forward unless at least fourteen days notice of the same has been given to the Secretary, and such motion once rejected by the Council cannot again be brought forward until after the next Annual General Meeting.

XIX.—The Secretary shall summon a Special Meeting of the Council if requested to do so in writing by the Chairman or seven Members of the Council.

XX.—The Annual General Meeting of the Society (of which seven clear days' notice shall be given by the Secretary) shall be held in May, or at a date to be fixed by the Council, for the purpose of electing officers of the Society for the succeeding year, and of receiving from the Council a Report and Balance Sheet for the twelve months ending March 31.

XXI.—A Special General Meeting may be called by the Council provided fourteen days' clear notice shall have been given to Members through the Society's Magazine. The Council shall also call a Special General Meeting upon the requisition of not less than twenty Members, if the Secretary of the Society receive the same fourteen clear days before any ordinary meeting of the Council.

XXII.—Notice of any proposal or motion to be brought before any General Meeting must be given in writing to the Secretary fourteen clear days before the ordinary meeting of the Council which immediately precedes the meeting in question.

XXIII.—Branches of the Society may be formed by the written warrant of the Council, on such conditions as it may deem fit, upon the written application of ten persons. Each Branch shall elect its own officers, and not less than three additional Members who shall together form the Committee for the management of that Branch.

XXIV.—A Junior Branch may be formed on a warrant from the Council at a school or elsewhere, of persons under age, upon the written application of an adult, who shall be held responsible for the conduct of such Branch, shall be a full member of the Society, and shall represent the Branch upon the Council.

Junior Branches shall be subject to the general rules of the Society, with the following exceptions :—

(*a*) The subscriptions of members of Junior Branches shall be fixed by their respective Committees, but only such members as subscribe Five Shillings per annum and upwards shall be full Members of the Selborne Society.

(*b*) Junior Branches shall pay to the General Fund one annual contribution of not less than Five Shillings, in addition to the subscriptions of their adult members.

(*c*) Each Junior Branch shall be entitled to receive the Magazine.

(*d*) The members of Junior Branches shall be styled Associates of the Selborne Society.

XXV.—The Committee of each Branch may make regulations for the conduct of the business of that Branch, provided that they are consistent with these rules.

XXVI. — Representatives of Branches shall be elected to serve on the Council of the Society (under Rule VIII.) in the proportion of one Representative to each fifty members of the Branch, but every Branch shall have at least one Representative.

XXVII.—Full Members of a Branch shall be for all purposes full Members of the Selborne Society.

XXVIII.—The Contribution of Branches to the General Fund shall not be less than 10 per cent. of the gross annual receipts, in addition to moneys due for publications or for services rendered.

XXIX.—The Council may withdraw the warrant of a Branch or Junior Branch for any good cause.

XXX.—These Rules shall be regarded as in force until emended at a General Meeting of the Society.

SELBORNIANA.

Bird Protection Orders.—We have received from the Colonial Office notification of a rule issued in the Federated Malay States of Selangor, Perak and Negri Sembilan, adding to the schedule of the local protection enactment the following six birds : *Melanoperdix nigri*, *Tropicoperdix charltoni*, *Caloperdix oculea*, *Osmotreron*, *fulvicollis*, *Treron nipalensis*, and *Macropygia ruficeps*. From the Home Office we have received an order, dated November 29, with reference to the County of Nottingham, protecting throughout the year a number of species, including all Buntings, Owls, Warblers and Woodpeckers, the Bullfinch, Chaffinch, Kingfisher, Linnet, Goldfinch, Nightjar, and Osprey, and adding the Robin and all species of Wren to the schedule of the Act. We have also received an order, dated December 7, with reference to Glamorgan, protecting the Wild Duck from February 1 to July 1, and prohibiting the taking or destroying of the eggs of Goldfinch, Kestrel, Kingfisher, Nightingale, Nightjar, Owls, Oyster-catcher, Woodpeckers, and some other species.

The St. Kilda Wren.—" The Special Protection Act passed at the end of last Session for the birds of St. Kilda, has induced dealers to put their nests and clutches of eggs of the native wren on the market. Yesterday at Stevens' Great Rooms, King Street, Covent Garden, fifteen clutches, with nests, taken in 1903, or in the last breeding season, were sold. The highest price made was 10s., and the lowest 6s. ; the total for the fifteen nests was £6 3s., which works out at a trifle over 8s. each. The Protection Act was passed at the instance of The Macleod, proprietor of the Island, and applies to all birds except the gannet, fulmar petrel, razor bill, guillemot, and puffin, used by the inhabitants for food. The feathers of these five species form an important article of export, and the fulmar petrel yields a valuable supply of oil."—*Standard*, December 10, 1904.

German Anti-Plumage League.—An International League for the Protection of Birds has recently been organised by the Countess von Groeben at Berlin, and Princess Metternich-Sandor at Vienna. Among the members are representatives of the highest aristocratic and diplomatic world of Germany and Austria, who are pledged to abstain from wearing feathers, wings, or any other portions of birds except ostrich feathers and the plumes of game-birds or poultry. They also undertake to carry on an active propaganda for the Society. The annual subscription is 50 pf. (6d.), and 20 m. (£1) qualifies for life-membership. The central offices of the League are at Berlin and Vienna. The National Committee of the Audubon Societies, which has done such good work on these lines in the United States, has promised its adhesion, and it is to be hoped that the distinguished patron-

age enjoyed by the League may help to make its principles fashionable, in which case the *bourgeoisie* will, no doubt, follow suit, and tear from their headgear the wings and whole birds which now deface so many "smart" hats.—*Guardian.*

Windsor Eyot.—With reference to the removal of an eyot in the Thames at Windsor, which the *Daily Mail* pointed out would seriously affect the famous view of Windsor Castle from the river, our Secretary has heard from Mr. Lionel Cust that "the destruction of the river bank is saved *for the present.*" This news, which is good so far as it goes, will be most satisfactory to our readers.

Plant-photography, Nature-study and Design.—Anyone who has studied the development of the landscape art of Mr. Alfred Parsons, will remember the accuracy of detail with which in his earlier manner he pourtrayed the flowers in his fore-

The Wild Strawberry.
(From a photographic study from Nature, by Mr. Henry Irving.)

grounds. It was obviously the result of much study from the life. So, too, a thoughtful consideration of the conventionalised designs of such masters of this branch of art as Mr. Walter Crane or Mr. Haité, will perceive a similar study direct from

Nature. Nature-study, to be worth anything, must be study at first hand, and not merely from books or drawings; but, just as the student requires to be taught how to observe, so all art is selective, and it is, therefore, useful for the art student to be taught how to observe. We should be sorry if any art student tried to learn flowers at second-hand from the collection of photographic studies in the Art Library at South Kensington; but these pictures may serve admirably to teach the student how to pose his subject and to suggest how, for purposes of design, the natural form may be conventionally treated. As really beautiful as well as accurate transcripts from Nature, these photographs would, with some of Mr. Gambier Botton's portraits of animals, be admirable substitutes for many of the pictures that now "adorn" our school-room walls. The South Kensington collection is arranged alphabetically and comprises the work of various artists; but none of those published are better than the photographs by Mr. Henry Irving. All of these evince most careful study, and we have marked more for special mention than we can possibly enumerate here; but undoubtedly those taken at closest quarters and most completely isolated are the most satisfactory. Among these are corn and various other grasses, the sprays, buds and fruits of many trees, and many garden favourites, as well as wild flowers; and few are, perhaps, more typical of Mr. Irving's method than the wild strawberry, a reduced copy of which he, as a member of the Society, has kindly lent us for reproduction.

"OSPREYS."

MR. EUGÈNE ANDRE in his book "A Naturalist in the Guianas," says:—

"The principal exports of Ciudad-Bolivar are hides, rubber, tonca-beans, feathers. and copaiba oil. . . . The feathers, known in the trade as ospreys, are sent from the country on the banks of the Apure and the Arauca. The swamps in the vicinity of these rivers are the abode of numberless flocks of wild-fowl, of which two varieties of egret are abundant. It is from these egrets that the feathers which form so expensive an article of commerce are obtained. The small egret (*Ardea candidissima*) produces the most valuable plumes: from the larger birds (*Ardea garzetta*) a coarser feather is obtained, which is not so much appreciated, but the wily dealer can sort his plumes so as to introduce a fair proportion of the inferior article without danger of detection. Quite a number of birds have to be slaughtered to produce a pound of feathers, only a few drooping plumes from the backs of the birds being taken. The season for collecting extends through the months of June, July, and August, that is, through the mating and breeding period. The egrets are wary birds, and difficult of

approach, except when they are nesting or rearing their young, and it is at this time that the collector obtains his feathers. The persistence with which the same localities are chosen by the birds for this purpose year after year, is an instance of that extraordinary predilection on the part of many birds to repair to the spot where they themselves have been reared for the purpose of nesting. These spots are called *garceros*, and as they are generally upon private lands, the owners make quite an income by hiring out the privilege to kill egrets. As much as 2,000 pesos, equal to 1,600 dollars of United States money, have been paid for this privilege on a single *garcero* during one season. In spite of the slaughter of thousands of these birds, the *garceros* continue to be used by the egrets, but in ever diminishing numbers. The beauty of a few feathers on their backs will be the cause of their extinction. The love of adornment common to most animals is the source of their troubles. The graceful plumes, which they doubtless admire in each other, have appealed to the vanity of the most destructive of all animals. They are doomed, because the women of civilised countries continue to have the same fondness for feathers and ornaments characteristic of savage tribes."

From the description above given, we have a very fair example of the manner in which a sort of vicious circle is formed in this class of trade when a demand is once created, and how very difficult it is to put a stop to it, or to know at what part of the circle to begin. We have here concerned, at least, the wearers of the plumes, the shopkeepers, the shippers, the landowners, and those actually employed in killing the birds, and, no doubt, other intermediaries, any of whom, taken apart from the rest, would probably consider that they were occupied in a perfectly harmless and innocent business.

C. W. Ware.

LETTER TO THE EDITOR.

Hares and Coursing.

DEAR SIR,—Being anxious to see for myself what sort of sport these annual gatherings afford, I have lately been to one of the great coursing meetings. The hares were driven by a number of beaters with white flags out of a large field of turnips, skirted by a narrow belt of young trees and rough grass, enclosed on the outer side by wire-netting with a single outlet, through which the hares were permitted to escape one by one. Close to this opening was a huge straw stack, against the side of which the slipper held the dogs in leash, ready to be loosed as the hares ran past. The course was up a gentle slope from half to three-quarters of a mile long, and in full view of the lookers-on. From what had been told me I

expected the hares would have a fair chance, and that the majority would escape. Such, however, was not the case, at all events when I was there. Out of more than thirty courses that morning very few indeed survived. Their death seemed a foregone conclusion. In many instances they were caught in the first three hundred yards or so, and this in spite of a fair start as far as distance was concerned. It was a common remark that the hares were weak this year, a reason for their being unable to hold their own against the dogs that did not commend itself to me. The odds against the poor hares were too great. They had beaten themselves against the wire-netting in trying to evade the men with the flags, while enemies on every side caused them to be bustled and confused. No wonder the result was little better than a massacre!

I venture to think that if the hares had not been disheartened before the greyhounds were loosed, they would have given a far better account of themselves, and the mettle of their pursuers would have been more severely tested.

A NATURALIST.

December, 1904.

REVIEWS AND EXCHANGES.

The Cambridge Natural History, Vol. VII., Fishes, Ascidians, &c. By S. F. Harmer, W. A. Herdman, T. W. Bridge and G. A. Boulenger. Macmillan & Co. Price 17s. net.

"The Cambridge Natural History," now rapidly nearing completion, is not intended for the mere general reader: it is a thoroughly scholarly work for students, amply sustaining the reputation of an ancient university as being in the van of scientific progress. The field covered by the last volume of the series which was reviewed in these pages, that by Dr. Gadow on Amphibia and Reptiles, permitted more detail as to life-histories, habits and general "natural history" than does that of the present volume. As the first volume dealing with the highest phylum of the Animal Kingdom, this necessarily deals largely with details of anatomy and embryology; and, though inevitably technical, much of these details is profoundly interesting, especially as presenting us with a full summary of much recent research bearing upon the very bases of the doctrine of evolution. The old-fashioned naturalist was content with a "sub-kingdom" Vertebrata, divided into five large classes, Fishes, Amphibia, Reptiles, Birds and Mammals; and it was the work of Darwin that first directed the attention of the general reader to forms at or below the base of this series, such as the lancelet and the ascidians, to which the term "vertebrate" is not strictly applicable, but which certainly approximate to the ancestral stock of the true Vertebrata. The elastic embryonic "notochord" is more truly characteristic than a bony vertebral column; so that we now have a "phylum" Chordata, divided into four very unequal "sub-phyla," viz., the Hemichordata, including the worm-like *Balanoglossus* and its near allies, the Urochordata, *i.e.*, the old group Tunicata, or the ascidians, the Cephalochordata, or lancelets, and the Craniata. The highest subphylum, moreover, is now divided into six, instead of five, classes, the Cyclostomata, or lampreys and hag-fishes, being separated under the name "Agnathostomata," not only from true fishes, but from all the higher, or gnathostomatous vertebrates, by being destitute of biting jaws. To the student of modern zoology there is perhaps nothing more novel in this volume than Mr. Boulenger's classification of the Teleostei; but the mere dilettante will be particularly grateful

AMPHIOXUS (*Branchiostoma lanceolatum*) in the Pantano at Messina. (After Willey.) From "The Cambridge Natural History," vol. vii., by kind permission of Messrs. Macmillan & Co.

Phyllopteryx eques., ½ nat. size. A remarkable case of protective resemblance. From "The Cambridge Natural History," vol. vii., by kind permission of Messrs. Macmillan & Co.

to Dr. Herdman, the President of the Linnean Society, for the eighty pages in which he deals with the ascidians, and still more for the succeeding five-and-twenty that summarise our knowledge of *Branchiostoma*, better known as *Amphioxus*. Sections dealing with the varied and brilliant colouration of fishes, their poison-glands, phosphorescent, sound-producing and electric organs, serve to show that anatomy and classification by no means occupy the entire volume; whilst the two specimens of the 440 illustrations, which, through the courtesy of Messrs. Macmillan, we are able to reproduce, the one of the lancelet at home, and the other a remarkable example of protective resemblance in an Australian sea-horse, serve to emphasise the many-sided interest of this admirable piece of work.

Birds by Land and Sea: the Record of a Year's Work with Field-glass and Camera. By J. M. Boraston. Illustrated by photographs taken direct from Nature by the Author. John Lane. Price 10s. 6d. net.

Mr. Boraston places on the forefront of his work the well-known passage in which Gilbert White says that "men that undertake only one district are much more likely to advance natural knowledge than those that grasp at more than

REDBREAST.

(From Boraston's "Birds by Land and Sea." By kind permission of Mr. John Lane.)

YOUNG OYSTER-CATCHERS IN THE SHELL.

(From Boraston's "Birds by Land and Sea." By kind permission of Mr. John Lane.)

they can possibly be acquainted with" ; and certainly he is able to give a very good account, both pictorially and otherwise, of the birds of Stretford, near Manchester, between September, 1902, and September, 1903, with a June divagation into Anglesey and Puffin Island. The Index includes the names of ninety species upon which observations are recorded, and these observations, if not very novel, have the advantages of having been made at first-hand, and of being set forth in simple pleasant language ; whilst the seventy or more photographic illustrations maintain an unusually high standard of excellence in books of this class. We cannot refrain from adding a word of praise for the publisher, who, while giving us a tasteful cover and excellent typography, by only using plate paper for the plates, has produced a library volume that can be held comfortably in one hand. *O si sic omnia !*

The Story without an End. From the German of Carové, by Sarah Austin. Illustrated by Paul Henry. Duckworth & Co. Price 1s. 6d.

This dainty little edition of what we may fairly term a German classic translated into the purest of English by Mrs. Austin, affords an admirable test and incitement of the poetic instinct of a child when brought in contact with Nature. In an age of materialistic realism, we believe such a stimulus to the subjective appreciation of Nature to have a high value in spiritual education.

The Hygiene of Bird Keeping. By W. G. Creswell, M.D. Kingston-on-Thames, R. G. Clement. Price 1s. net.

This pamphlet of 32 pages, illustrated with views of the author's aviaries, is based upon articles contributed to *Bird Notes* and the *Feathered World.* It is a thoroughly practical discussion of the conditions requisite for the health of cage-birds, advocating outdoor aviaries, constant clean baths and strict cleanliness, the avoidance of egg food as productive of septic fever, and the use of seeds, gentles, mealworms, house-flies, and a mixture of biscuit, dried water-bugs and dried ant-cocoons, according to the class of bird concerned. We recommend all bird-fanciers to obtain a copy and study it carefully.

Philips' Nature Study Drawing Books: Leaves, Flowers, Fruit. By A. F. Lydon. George Philip & Son. Price 3d. net each.

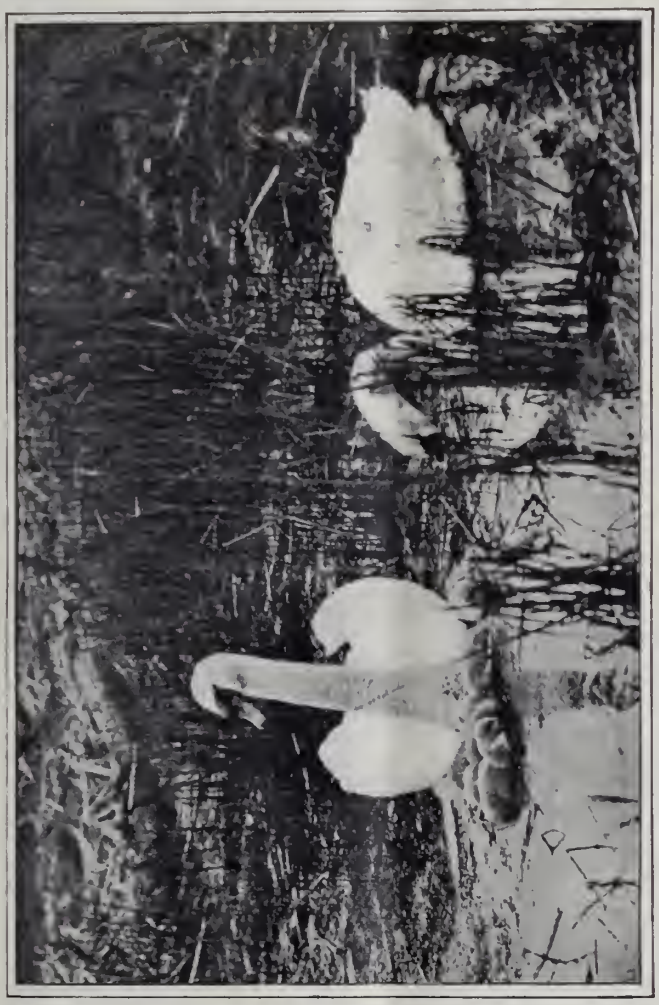
It was perhaps inevitable that the publisher should see only in the new school method known as Nature-study a new subject for which cheap class-books were to be provided. These books of drawing copies are the pernicious result of this misconception. The drawings are not bad, though the colouring is atrocious; but the whole principle is wrong, flat and somewhat conventionalised drawings taking the place of the real objects and a partially sketched-in outline being provided for filling-in. This is not Nature-study, but drawing badly taught.

The Totnesian : the Magazine of King Edward VI. Grammar School, Totnes. Vol. viii. Minimum subscription, 1s. 6d. (three numbers).

Fortunate are the boys whose school lot is cast at Totnes Grammar School. In one of the most beautiful parts of England, at the head of the navigation of "the English Rhine," in a quaint old walled town of fabulous antiquity, celebrated to day for cyder and for toffee, they are surrounded by every interest that should delight a healthy, well brought-up boy. The quarries that yield the marbles of Torquay, Ipplepen, and Ashburton are but the practical side of a geological complex that has taxed the powers of the most astute: fern-decked lane, lichen-hung trees and the bogs and heaths of Dartmoor afford ample field for the botanist; and the standing stones, hut-circles and crosses of the moor, such lovely ruins as Berry Pomeroy and Dartington, with their associations with Seymours, Champernownes and Froudes, or the Benedictine screens of Harberton, Dartmouth or Totnes itself, are but a few of the attractions for the archæologist and the photographer. The school has an excellent little magazine issued terminally, and its Natural History Society is affiliated to the Selborne Society as a Junior Branch.

The Adventures of Cock Robin and his Mate. By R. Kearton. With upwards of 120 illustrations from photographs taken direct from Nature by Cherry and Richard Kearton. Cassell and Co. Price 6s.

Children who are fond of animals, and especially of birds, an ever-increasing multitude, among country-residents at least, are sure to appreciate this volume, with its wealth of photographic illustration of the very finest achievement. As



SWANS AND THEIR YOUNG.
(From Kearton's "Adventures of Cock Robin." By kind permission of Messrs. Cassell & Co.)

the specimen, which, by the courtesy of Messrs. Cassell and Co., we are able to reproduce, will demonstrate, these are by no means confined to Robins, the primary subject of the story, nor in fact are they restricted to bird life; whilst, as the author justly claims, much valuable information on general natural history is imparted in the course of the simple annals of bird life. We should especially recommend the book for parents to read to their younger children, as, sooth to

say, Mr. Kearton is not only a trifle too much like Mr. Barlow in his didacticism, but is also rather too prone to use long words, which may require to be paraphrased. The type is nevertheless large and clear enough for the juvenile reader.

Norwood Natural Science Society. Notes and Comments for October and November.

This modest record of many interesting observations is the organ of another small local body affiliated to our Society. In the November number, however, one paper is not quite up to date. The *Mimulus* of our ponds and streams is by no means confined to our southern counties: it is not the Chilian *M. luteus*, but *M. Langsdorffii*, a native of Western North America; and it is a pity to speak of the lobes of its stigma as "leaves" or "leaflets," terms likely to mislead the young morphologist.

The Parent's Review for December contains, *inter alia*, a very sensible paper upon Nature Study.

In the *American Botanist* for October we see that the Editor, whose experience of the generally closed condition of Sundew blossoms differs from our own, takes exception to our application to them of the term "cleistogene," on the ground that that term commonly connotes reduction in parts. That the two things often go together we cannot deny; but "cleistogene" etymologically means simply "produced closed," and technically is merely the expression of a simple structural fact, important as necessitating self-pollination. As the Editor suggests, such a merely closed flower may well be followed at a later stage of evolution by a reduction in the floral organs, especially in the petals, number of stamens and amount of pollen.

Received: *The Plant World* for September and October; *Our Animal Friends* for October; *The Victorian Naturalist* for November; *Bird Lore* for November and December; and *The Naturalist*, *The Irish Naturalist*, *Nature Study* (Lockwood), *The Animal World*, *The Animals' Friend*, *The Humanitarian*, *The Agricultural Economist*, *The Estate Magazine*, and the *Commonwealth* for December.

NATURAL HISTORY NOTES.

203. Late Bats.—The Pipistrelle, or Common Bat, as is well known, is generally the last of all the British species to hibernate, and its sleep is generally far more interrupted than that of its congeners. This year, however, I have had the opportunity of observing that this bat is more indifferent to cold weather than I had previously imagined, for although it is frequently known to make its appearance on a *mild* winter day, I was very surprised to see two individuals flying about near Halstead, Essex, on the bitterly cold evening of November 22, when the snow lay on the ground. I had observed that the pipistrelle appeared every evening up to that date, though I have not seen one since.

December 8, 1904. W. R. D.

204. Dog and Weasel.—Early one morning my attention was attracted to the continued barking of a dog in front of the house. On opening the door to investigate the cause of the same, I saw a full grown collie near a young chestnut tree, but nothing whatever visible at that distance to cause the evident excitement of the dog. I presently, however, heard the unmistakable whistling noise of a weasel (I have kept a weasel, so am well acquainted with the sound), but could not yet see it, it being quite hid by the grass. On approaching nearer I saw the little creature, which was being kept at bay by the dog, and as the latter kept circling round the tree and incessantly barking, so his diminutive foe kept dodging from the other side. I watched this performance for several minutes, the dog seeming as much surprised at the appearance of the little animal as at the sound it produced, but evidently afraid to tackle it, as he never approached nearer than two or three feet. When I at last went to get a still closer view, the dog skulked quietly away and the weasel ran off in the opposite direction and escaped under a fence.

Wolverhampton, JOHN HORNE.
December 7, 1904

205. **Dog Fish.**—The papers have lately been telling us of a plague of dog fish that have thrown hundreds of men out of employment by destroying the pilchard fishery on different parts of our coasts. Various remedies have been suggested, one being that the dog fish should be "attracted to a spot by bait and destroyed by dynamite"; another that "factories should be set up to extract their oil and turn what remained into manure." No one has suggested that they should be used as food, and it is a pity that those who are in authority do not take measures to bring this prominently before the public, for their flesh is palatable and good. Unfortunately, however, the poorer classes, who would most benefit by cheap fish, are very reluctant to touch any kind to which they are unaccustomed. Many fish commonly used for food, such as hake, ling, skate and others, are as predaceous as dog fish, and like them are more particular in their diet than the common cod, in whose omnivorous stomach a tallow candle, a guillemot, and even a bunch of keys, have been found.

Frank Buckland tells us that "small fish-dealers cut off the heads, tails and fins, of dog fish, and split them into halves: they are then salted and hung out to dry, and taste when broiled, like veal chops. The great heads and intestines, &c., are left till picked up by the owners of crab-pots, or stalkers for baits. The livers are cleaned and boiled for oil for the boats in winter. There is an immense deal of gelatine in these heads and fins, and I tried in vain to persuade the men to boil them up; quoting the example of the Chinese, who esteem shark's fin as a great delicacy."

The Chinese are not the only people who have found out the virtue of sharks' fins, for a friend of mine lately writing from Burma, described them as making a toothsome and excellent dish. The fins of dog fish would be still better. These fish are a common article of food with our neighbours across the Channel.

EDMUND THOS. DAUBENY.

206. **Death-Watch Beetle.**—A friend of mine who has always been a keen observer of nature, lived for some years in an old brick and timber farm-house, in Cheshire. Hearing the ticking of the "Death Watch" very distinctly one day, she traced the sound to the woodwork of the window, and tearing off the wall-paper where the sound was loudest, discovered the insect, a small beetle, which continued its ticking by striking its head against the wood.

48, *Kingsland Road, Birkenhead,* ELLEN HIBBERT.
December 13, 1904.

207. **Tapping.**—Mr. Hastie's solution of "tapping" does not convince me. The noises of a grate gradually cooling, or of furniture under change of temperature, are familiar ones. They are more or less spasmodic and irregular in their intervals, and could not deceive a trained ear as to their cause. I have studied these various tappings, and have discovered most of their causes, though the spider that is said to tap has hitherto baffled me. I once put a death-watch in a pill box, which soon began to tap, and was answered from across the room. Presently a second death-watch crawled on to the table, and stopped every now and then to tap, and eventually entered the pill box, which I had meanwhile opened. They then paired.

This summer, tapping went on in my bedroom for weeks; some of which at all events was caused by death-watches; though methinks not all. On one occasion I located it in a small picture-frame, in which it went on as I held it in my hand. This was caused by a death-watch. The presence of these little weevils in a piece of wood can be detected by the borings of the larva, commonly called "dry rot," with which we are only too familiar.

December, 1904. EDMUND THOS. DAUBENY.

[It is to be hoped that no one will imagine the borings of the larval *Anobium* to be the only cause of "dry rot," a name more strictly applicable to the fungus *Merulius lacrymans*.— ED. *N.N.*]

SELBORNE SOCIETY NOTICES.

Business Meetings.—The next meetings of the Council will be held on Tuesday, January 3, and Tuesday, January 24, at 5.30 p.m., and the Publications Committee will meet on Monday, January 9, at 5.30 p.m.

New Members.—*Central Society*—Miss S. Pattison, Ripon.

Ealing Branch—W. Deane Butcher, Esq., M.R.C.S., Ealing.

Hampstead Branch.—Miss Winifred E. Bell, Gospel Oak; Edward Bolus, Esq., B.A., Mrs. Bolus, Stoke Newington Common; Miss Bessie Clissold, H P. Cooper, Esq., Mrs. S. M. Cooper, F. Falkenheim, Esq., Hampstead; Miss Lucy Holmes, South Hampstead; Mrs. Temple Moore; Myer S. Nathan, Esq., LL.D.; Miss D. Parsons, Hampstead.

Subscriptions and Donations.—The Council has pleasure in acknowledging subscriptions of more than 5s. from the following members: W. H. Warner, Esq., £1 1s.; W. Whitwell, Esq., £1 1s.; W. Smith, Esq., 10s.; and a donation from J. J. Williams, Esq., of 10s.

Library.—The Honorary Librarian has pleasure n announcing the following gifts to the Library of the Society: "Notes on the Natural History of the Bell Rock," by J. M. Campbell, and "Dunstable: the Downs and the District," by W. G. Smith, from the Editor; "Introduction to Entomology" (2 vols.), by Kirby and Spence; "Journal of a Naturalist"; "Howitt's Year Book of the Country," from William Carpenter, Esq.

NEWS FROM THE BRANCHES.

Clapton.—*December* 17.—A meeting was held at Sigdon Road School, when a most interesting paper was read by Mrs. Durrant. The subject was "Plant Lore and Legends," and it was shown that, from most ancient times, a number of curious and pretty legends centred around even the commonest plants and flowers. The selection included legends relating to National flower-emblems, the Rose, the Shamrock and the Thistle, and the Lily of France. A full description of the Passion-flower was quoted from a monk who wrote in the year 1610, and who described in each part of the flower an emblem of the Sacred Passion. Of purely mythical plants Mrs. Durrant selected the Vegetable Lamb, Barnacle Goose and Mandrake, giving an account of each of these as described by writers of the seventeenth and earlier centuries. The wood of the Holy Cross has naturally formed the subject of many early and mediæval traditions, some of which were also included in the paper.

At the conclusion of the meeting, a hearty vote of thanks was accorded to Mrs. Durrant for her valuable paper.

The next meeting of the Branch will take place on January 21, when a paper will be read by Mr. Ernest A. Nash on "Some Legendary Explanations of Natural Markings in Living Nature."

Ealing.—*December* 10.—An understanding exists between the Ealing Branch and the Ealing Natural Science and Microscopical Society, by which the members of one may attend the meetings of the other, and on December 10 several Selbornians were present at a meeting of the Ealing Society, when Mr. Wilfred Mark Webb, F.L.S. (Honorary Secretary of the Selborne Society) delivered a lecture on "Evolution in Dress," illustrated by lantern slides, in which he applied the great principles of Darwinism to modern dress, and traced its history in many cases from the small vestiges which are to be seen here and there in our every-day clothes. The lecture was most cordially received and a discussion followed, in which Mr. B. B. Woodward, F.L.S., F.G.S., and Mr. Deane Butcher, M.R.C.S. (who has succeeded the Rev. Professor Henslow in the Presidency of the Ealing Society), took part.

Hampstead.—*November* 21.—Members of the Branch enjoyed the privilege of hearing the well-known astronomer, Mr. E. Walter Maunder, F.R.A.S., of Greenwich Observatory, lecture upon "The Sun and Sun-spots." It was now, he said, possible to observe the sun and its markings without the old risk,

for by the aid of photography the sun painted his own portrait. Mr. Maunder showed slides bearing upon the sun's rotation in a period of twenty-five to twenty-seven days. The spot region, he explained, was a comparatively small one north and south of the Equator, varying from 5° to 30°. A number of interesting photographs were thrown upon the screen, and the appearance of spots, their dark centre and lighter fringe, was fully gone into. Periodicity of the phenomena was discussed, as well as the different theories that had obtained, but recent opinion seemed to point to spots as due to great uprushes of heated matter from below, making a breach in the sun's bright surface. Mr. Maunder furnished the estimated area of the greatest spot ever photographed, and then showed that rainfall had no connection with such spots, neither had recurring famines in India, as some had supposed. He dealt fully with what are known as magnetic storms, and on the conclusion of his address was much applauded.

The Chair was occupied by Mr. W. H. Maw, F.R.A.S., the Society's kind host at Nutfield on July 2 last, who was warmly greeted by the numerous audience.

December 12.—It was to a crowded room that Mrs. L. Douglas Wilson delivered her lecture on Pompeii, the attractiveness of which was enhanced by a splendid series of lantern illustrations, eighty in number. The first historical mention of Pompeii is B.C. 310, and Mrs. Wilson explained that the district was occupied in succession by different tribes, the last of whom, the Samnites, styling themselves Campanians, were conquered by the Romans. At one time, according to Strabo, Pompeii was a seaport, whereas it is now a mile from the sea. Reduced to ruins by an earthquake in A.D. 63, the city was rebuilt in Roman style by the inhabitants, who, under cloudless skies, soon forgot their former misfortune. Sixteen years later occurred the memorable eruption of Vesuvius, and Pompeii lay buried. Abandoned by the ancients, by the Middle Ages its name had been forgotten. Excavations were made from time to time, but nothing systematic was done till Fiorelli, an Italian antiquary, took up the work in 1860, and to him a great debt is owing. A plan of Pompeii was thrown on the screen, and after this the gates, walls, and streets were described and illustrated. The Forum received full attention, and scenes within it were, so to speak, reconstituted. Upon the Basilica walls in those far-off days people scribbled even as they scribble in other places now. Some of these messages of long ago were read. Then followed details of the temples, in which Pompeii was very rich, and in an impressive passage Mrs. Wilson related how the catastrophe had suddenly stayed the mason's hand and trowel in their course, though the work still bears the freshness of yesterday. The construction of the baths and the uses of their chambers were described. On the slope of a hill had stood the great open-air theatre with room for 5,000 persons, and curiously enough, under the seats were hung little bronze cups to act as voice-carriers, in a way an anticipation of the telephone. The amphitheatre could accommodate a crowd of some 12,000, who assembled to witness gladiatorial displays. By no means the least interesting part of Mrs. Wilson's address was her description of Pompeian houses. The apartments were considered in detail, as well as the mural decorations, while some of the mosaics were stated to be remarkable for their beauty. About the Street of Tombs there is nothing mournful, for flowers now grow everywhere, and in the sunshine bright green lizards dart across the way. On the conclusion of her admirable lecture Mrs. Wilson was accorded hearty thanks on the motion of Messrs. James Walker and G. H. Cottam, and the usual compliment was passed to the Chairman, Mr. H. Plowman, F.S.A.

On *January* 16 a lecture will be given at 8.30 p.m. at the Subscription Library, Prince Arthur Road, Hampstead, by Mr. Oliver G. Pike, entitled "In Bird-land with a Camera." The Chair will be taken by Mr. A. Holte Macpherson, M.A., B.C.L., F.Z.S. (Vice-President of the Society).

North Middlesex Junior.—On Friday, November 18, Mr. G. Brooks gave a very interesting paper on "English Butterflies and Moths." It was illustrated by a very good collection of specimens, most of which the essayist had watched through their life-history. He also exhibited a specimen of the now extinct Copper Butterfly. Mr. C. M. Hall, M.M.S., the Hon. Secretary, was congratulated upon his recent election as a member of the Malacological Society.

On Friday, December 2, Prof. Boulger, Editor of NATURE NOTES, gave a lecture on "The Life and Work of Gilbert White," illustrated by the Society's collection of lantern slides. The Chair was taken by Mr. J. L. Wood, F.R.H.S., and there was a large and appreciative audience. In his introductory remarks the lecturer congratulated the Branch on the rapid progress it had made during its short existence, and for the benefit of strangers present, described the objects of the Selborne Society.

SELBORNE SATURDAY AFTERNOONS.

November 19. — On this Saturday afternoon the Educational Museum of Natural History, arranged by Mr. and Mrs Yeatman Woolf at 46, St. John's Wood Park, was thrown open to members of the Society. Some few of the latter had already had the privilege of seeing the collections extended to them, as described in NATURE NOTES for last November. There were, however, between forty and fifty visitors on the second occasion, when Mr. and Mrs. Woolf had redoubled their efforts in the way of displaying their treasures. Mr. Yeatman Woolf gave a special address on the subject of termites, or white "ants," illustrated by specimens and drawings. His remarks were all the more interesting, seeing that he has studied these wonderful social insects on the spot. Mr. Macleod Yearsley, F.R.C.S., F.Z.S., also made some interesting allusions to the structure and geological history of cockroaches as illustrating the series of insects on view. The proceedings terminated with a cordial vote of thanks to Mr. and Mrs. Woolf, proposed by Mr. George Avenell, Chairman of Council, which was seconded by Mr. H. Plowman, F.S.A.

November 26. *Stationers' Hall.*—Upwards of a hundred members and friends assembled, and were glad to leave the raw, cold fog without to enjoy the cordial welcome within. Mr. C. R. Rivington, F.S.A., Clerk to the Company, received the visitors in the Court-room, and delivered an address. He mentioned that in order to occupy the Chair from which he spoke a man must have belonged for forty years to the Company, which he could not join as a minor. Part of the ground on which his audience stood was on the site of the old city wall, while near by had once existed the London Coffee House where juries used sometimes to be lodged. The Stationers' was one of the minor Companies. It was founded about 1403, but it was not until Queen Mary's reign that it got a charter, which was granted as an engine to suppress heretical books, rather than to stimulate the printing trade. The small trading business, established in 1601, was still carried on. The Company had three chief interests. It was a City Guild; there was the trading partnership, consisting of the Stockholders who owned the Hall and most of the property round; and there was the registration for protection of copyright. The Great Fire destroyed practically all the Company's records, papers, and property of great value. Soon afterwards the present Hall, very much after the style of college halls, was erected. It had since undergone but little alteration. A noteworthy feature was the fine oak screen, the work of Stephen Colledge, who was hanged at Oxford for treasonable conspiracy in 1681. Of interest in the Court-room were the fine Chippendale overmantel, the portrait of Samuel Richardson, author of "Pamela," and Master of the Company in 1754, and a large picture by Benjamin West, at one time President of the Royal Academy. On the table, open to inspection, was a register dating from 1556, containing many entries of Shakespeare's works. On the conclusion of his address Mr. Rivington showed the Company's superb plate in an adjoining chamber; and, on the motion of Messrs. H. Plowman and C. M. Hailes, hearty thanks were given him for his services.

Apothecaries' Hall.—It was a startling change from the turmoil of Ludgate Hill to the old-world premises of the Society of Apothecaries, but the Selbornians were soon comfortably seated in the well-panelled Court room listening to a paper of great interest, read by Mr. A. Mowbray Upton, the Clerk. At the outset he reminded his hearers that the Apothecaries styled themselves a Society, and that it was carrying on the work entrusted to it by the charter of James I. The granting of this was believed to be due to female influence brought

to bear on Anne of Denmark, the Queen. At a former period the Grocers and Apothecaries were united, though it was a combination that did not work well. The Society was a trading, as well as a civic body, and for nearly three hundred years had manufactured in a large way, and sent drugs all over the world. In the year of Waterloo an Act was passed, giving to the Society powers of examination, and it thenceforth became a scientific examining body, able to grant licenses and diplomas to practice in medicine, surgery and midwifery, in the same way as the Royal Colleges of Physicians and Surgeons. The Society was one of the first to grant these to ladies. About its Hall clustered historic associations, and the buildings in all occupied three-quarters of an acre. The site was once known as Cobham's House, and on it was erected the Society's first hall, which disappeared in the Great Fire. The existing hall was built soon afterwards and had undergone no substantial change. In it the visitors would notice the screen and the old trade banners, as well as the pictures and the well-preserved muniment chest, the latter dating from 1668. The massive oak staircase and kitchen, with its mighty fire-place and smokejack, remained in their original condition. In the library the book-shelves dated from 1744, and the panelling from 1681. The panelled Court room had suffered alterations. The picture of Gideon Delaune, apothecary to the Queen of James I., was presented to the Society in 1642; there was also the portrait, on a panel, of the king named; but perhaps the gem of all in the Court room was Sir Joshua Reynolds' painting of John Hunter, the famous surgeon. The chandelier dated from 1766, and the chairs from about the same period. With regard to the Physic Garden at Chelsea, this had come to the Apothecaries in 1673; there was a further grant of it to them by Sir Hans Sloane in 1722; Linnæus had visited it in 1736; and it was only a few years ago that it passed into the control of another body. The Selbornians would realise Mr. Upton's interest in the Society of Apothecaries when he stated that his father, grandfather and great-grandfather had occupied the post of clerk before him.

Mr. C. R. B. Barrett, M.A., who has written and is about to publish the Society's history, also assisted in the explanations, and the proceedings ended with an expression of the warmest thanks to him and Mr. Upton, on the motion of Messrs. R. Marsbman Wattson and H. Plowman.

December 10.—A visit to the Collegiate Church of St. Saviour's, Southwark, was arranged for this date, and nearly forty Selbornians met at the appointed time. Canon Rhodes Bristow took the party in charge and pointed out the beauties of the venerable edifice in all their most interesting details. Originally the Church was called "St. Mary Overie," or St. Mary by the Waterside," *i.e.*, Bankside; but on the dissolution of the neighbouring Abbey of Bermondsey, the parishioners petitioned the king to transfer the name to the Church near—St. Mary. The foundation is very old, for remains of the ornamental work of the Saxon or Anglo-Saxon period have been discovered. It is a cruciform edifice, the Lady-chapel at the extreme east end being the oldest part remaining. This dates from the early part of the 13th century. Some Norman arcades at the west end and an old Norman door are still to be seen. The screen is a fine piece of rich Tudor architecture, similar to those at Winchester and St. Albans cathedrals, minus the statues. It dates from 1520, and was built by Bisbop Fox, whose design, the pelican, is to be seen in several places. The Lady-chapel has a magnificent groined roof and contains the tomb of Bishop Andrewes, together with a finely carved pre-Reformation altar, and a beautiful stained-glass window. At one time it was used as a kind of ecclesiastical court, for here Gardiner and Bonner tried the Marian Martyrs, Hooper, Rogers and others, and sentenced them to the stake. Among the accused was John Marbecke, a great plain-song writer, whose music is used in the Church to-day, and who escaped from a fiery death by reason of bis "greate skill in musicke." After the Marian persecutions the Church declined, and the Lady-chapel was leased to a baker, and for many years was used for ignoble purposes. The lofty cathedral-like aisles and nave possess some beautiful stained-glass windows, such as the Jesse Window in the south transept, one to the Marian Martyrs, and one in memory of the Prince Consort in the north transept, that in the east end illustrating Christ as our Saviour, that in the west illustrating Christ as our Creator. Besides these there are memorial windows to Massenger, Beaumont and Fletcher, the dramatists,

Alleyne, the founder of Dulwich College, who was churchwarden here, John Bunyan, St. Swithin and others. All of these were inspected and their meanings and symbols luminously explained and commented on by Canon Bristow. Several monuments add to the historic interest of the church. The poet Gower and his wife lie under a beautiful canopied tomb in the north aisle: an oaken effigy of a Crusader, and a monument with kneeling figures to Alderman Humble, an ancestor of the present Earl of Dudley, also find places. There is a good deal of modern oak carving in the choir and many of the windows are modern; but all the restoration, where there has been any, has been done in a reverential manner, and the modern work is in entire keeping with the character of the church. A more charming and instructive lecturer could not be found than Canon Rhodes Bristow, and he carried away with him the gratitude and thanks of the party at the close.

FORTHCOMING ARRANGEMENTS.

Saturday, January 14, 1905.—Visit to Gray's Inn. Assemble at 2.30 p.m. outside the chapel in Gray's Inn Square, entrance, Gray's Inn Road. Guide, M. D. Severn, Esq., Librarian, who will deliver an address upon the history of the Inn.

N.B.—As the number of visitors is limited to sixty, priority will be given to Members.

Saturday, January 28.—Natural History Museum, Cromwell Road, S.W. Meet Mrs. Percy Myles in the Central Hall at 2.15. Mr. George Murray, F.R.S., Keeper of the Botanical Department, Vice-President of the Selborne Society, and President of the Ealing Branch, has kindly consented to give a Demonstration to the Selbornians in his own Department.

ANSWERS TO CORRESPONDENTS.

I. N. Roper.—*Dothidea ulmi*, belonging to the family *Dothideaceæ* of the *Ascomycetes*.

H. R. M. B.—(1) Plant Breeding, by Prof. L. H. Bailey (Macmillan). Price 4s. (2) The Origin of Cultivated Plants, by Alphonse De Candolle. (International Scientific Series). Price 5s.

NOTICES TO CORRESPONDENTS.

1. All communications for NATURE NOTES must be authenticated with name and address, not necessarily for publication.

2. The return of an unaccepted contribution can only be guaranteed when it is accompanied by a stamped and addressed envelope. We cannot undertake to name specimens privately, to return them, or to reply to questions by letter.

3. All communications for any number must be in the Editor's hands by the 10th of the preceding month.

4. Communications for NATURE NOTES, books for review, specimens for naming, &c., should be addressed to the Editor, PROFESSOR BOULGER, F.L.S., F.G.S., 11, Onslow Road, Richmond, Surrey.

5. For the supply of the Magazine to others than members, or for back numbers (except in the case of new members), address the publishers, with stamps at the rate of 2½d. per number, Messrs. JOHN BALE, SONS AND DANIELSSON, Ltd., 83-91, Great Titchfield Street, London, W.

6. Letters connected with the business of the Society, subscriptions, and applications for membership, should be sent to the local Honorary Secretary, or to the Honorary General Secretary of the Society, WILFRED MARK WEBB, F.L.S., at 20, Hanover Square, London, W.

Nature Notes:

The Selborne Society's Magazine.

No. 182. FEBRUARY, 1905. Vol. XVI.

OBJECTS OF THE SOCIETY.

To promote the study of Natural History. To preserve from needless destruction such wild animals and plants as are harmless, beautiful, or rare. To discourage the wearing and use for ornament of: (1) The skins and furs of such animals as are in danger of being exterminated; (2) the skins and plumage of such birds as are not domesticated. To protect places and objects of natural beauty or antiquarian interest from ill-treatment or destruction. To afford facilities for combined effort in promoting any of the above or kindred objects.

SELBORNIANA.

Selborne Church—An Appeal.—The Vicar of Selborne is appealing to the lovers of Gilbert White to help towards some very necessary repairs to the parish church, where the naturalist's grandfather officiated as vicar, and where the naturalist, no doubt, was baptised, where he acted for many years as curate, and in whose graveyard he lies buried. The framework of the bells, for instance, has not been touched since 1735, when as White tells us, the three ancient bells were cast into four, and a fifth added at the expense of Sir Simeon Stuart, who ordered "that the treble bell should be fixed bottom upward in the ground and filled with punch, of which all present were permitted to partake." We shall be happy to forward any donations which our readers may send us for this object which, we feel sure, must appeal to all Selbornians, and may remind them that Selborne still happily remains a small secluded village, quite unable to meet the expense of this needful work.

Telephone Poles and Epping Forest.—The Post Office authorities have of late been seeking powers, for the sake of

economy, to disfigure various commons and public open spaces by the erection of more of the hateful poles and wires with which too much of our land is already defaced. Epping Forest is their latest point of attack—an open space, secured by the Corporation of London, to be preserved in its natural condition, and dedicated by Her late Majesty in person, to the public in perpetuity. Railway and tramway companies have since threatened this sacrosanct national preserve, only to be defeated by an overwhelming public opinion. While we go to press, a deputation is waiting upon the Postmaster-General, in which the Commons Preservation Society and our own Society are co-operating in the endeavour to avert this danger. The needful wires can be readily carried underground, by the side of the roads, of which there are—if anything—too many through this narrow strip of forest.

THE DISFIGUREMENT OF OUR ROADSIDES—A CRITICISM.—*The Journal of Botany*, for January, commenting on the action of the Devon County Council as to wild plants, says:—

"It must be obvious to anyone who goes about the country with his eyes open, that the local authorities themselves are the greatest enemies of our native vegetation. In all the counties round London the hedges are mercilessly and quite unnecessarily clipped; the hedgebanks are scarified every year, and the native undergrowth is destroyed, to make room for nettles and other unsightly weeds which thrive under the new system and disfigure our land; the grassy roadsides are every year more and more trenched upon, and, when allowed to remain, are used as dumping-grounds for road-scrapings. To make matters worse, the clippings and torn-up plants are in many cases not removed, but are left to wither where they have fallen, thus further disfiguring the already marred hedgebank. We are at a loss to understand how it is that the Selborne Society, which one would expect to be foremost in opposing mischief of this kind, has apparently taken no action in the matter, which, so far as we are aware, does not even receive due attention in NATURE NOTES, the Society's magazine."

This is a matter to which attention has several times been directed, both in these pages and at the Annual Meetings of the Society. It is one in which, in our opinion, useful work can probably best be done by individuals able to influence local urban and rural district councils, parish councils, &c., as there is no central body which the Society can approach; and we would, therefore, once more appeal to our Branches to do what they can in this matter.

THE PRESERVATION OF WILD PLANTS—A PRACTICAL SUGGESTION.—"The decision of the Devon County Council to stop, by the infliction of a fine, the wholesale uprooting of flowers and ferns in hedges and woodlands, has been made none too soon. Already the lanes have been robbed of much of their beauty for the sake of the small gain to be made from the spoils, and it does not seem that the excuse of actual need can be pleaded for the raiders. It is to be regretted that the desire of adding to a small income should not have prompted them rather to some form of industry by which the county would have been the better instead of the worse. The cultivation of herbs, for

instance, which, with all the revival of interest in gardening of late years, has not yet regained the place it once held in England, could be pursued with very little difficulty, and but small initial outlay. A few herbs—parsley, sage, mint and thyme—are still grown everywhere, but basil, marjoram, rosemary, borage, tarragon and hyssop, to name only a few constantly mentioned in old recipes, are not so easy to come by, and would probably find purchasers. Certain medicinal plants, again, now largely supplied from abroad, could be cultivated at small cost. And if the profits should be small, the tending of even a small plot of ground would bring with it a satisfaction that must be absent from the despoiling of hedgerows."—*Guardian.*

Windsor Eyot.—With regard to the proposal to destroy an eyot in the Thames at Windsor, our Secretary has received the following letter from Sir Francis Tress Barry, Bart., M.P.:—

"St. Leonard's Hill,
"Windsor.

"Dear Sir,—I have just made a fresh arrangement about the ground of the 'Alexandra Gardens,' which will permit the eyot near the railway bridge being retained.

"Yours truly,
"F. T. Barry."

The Bioscope in Natural History.—Mr. F. Martin Duncan still continues to use the cinematograph to record the movements and habits of animals, and at the present time some results of his work are being exhibited at a series of *matinées* at the Alhambra Theatre. Every afternoon there are shown seventy films dealing with the animals at the Zoological Gardens, and their daily life, as well as with other interesting creatures elsewhere. There is brought before us the familiar bear on its pole; the feeding of the pelicans, reminiscent of an item in the programme of old menageries; the storks' tug-of-war, and the tongue of the chameleon. Some of the pictures of the larger monkeys playing with their keepers are veritable studies in expression. In fact, one can see in an hour episodes which would only be witnessed in many dozens of visits to Regent's Park. One or two of the films have been obtained out of England, such as those showing elephants in India, and the buffaloes on Lord Strathcona's ranch in Manitoba, as well as other large animals, such as moose and elk, on his other estates.

Previous to the exhibition of the pictures we have alluded to, the voyage of the "Kaiser Wilhelm II." to New York is shown depicted, and we mention this because some of the photographs of the sea moving are quite splendid, and must have a charm for all the lovers of Nature. They were taken by Mr. Charles Urban, who, with Mr. Duncan, introduced the microbioscope and made it a success, not only in the eyes of

naturalists, but what is more surprising, also in those of the British pleasure-seeking public. These enthusiasts are well worthy of the motto which they have adopted:—

"To amuse and entertain is good
To do both and instruct is better."

WINTER SUNSHINE.

THE low sun of winter—
What light is more dear
Than the low sun that lightens
The close of the year?

It shines in our faces,
And, from the bright pane
And the frost on the puddle,
Looks at us again.

It brightens the meadow,
On whose brilliance we see
The skeleton shadow
Of the bare winter tree.

It makes the moss golden,
It finds the brown sedge,
And reveals every leaf
That is left in the hedge.

Now dark gleams the ivy:
The bracken burns red,
And the leaves of the beech
Rustle crisply and dead

On their thick wayside bushes
Unswept by the gale
While the tall stalks of umbels
Shine ghost-like and frail.

There trails the long bramble
With dry leaves that curl
'Gainst the pale-gleaming sky
With its sapphire and pearl.

So cold in its shining
So tender and clear,
Is the low sun that lightens
The close of the year.

A. F.

FOWL LANGUAGE.

MY window here looks out upon a meadow in which are several fowls. Much of their time is spent round about a small haystack, the upper part of which projects very much over the base, so as to afford them good shelter from rain.

The other day I noticed a pony which had been feeding in the meadow, busily engaged in rubbing his back against the stack. He had backed as far as he possibly could under the projecting part, and was putting such vigour into his movements as to make the whole stack rock perceptibly. This was noticed by some fowls at the opposite side, which could not see the pony. They were staring with outstretched necks and heads turned from side to side, in wonder and consternation at the unwonted movements of the haystack. Suddenly the old cock uttered a loud hoarse scream, whereupon the rest of the fowls at once fled in great haste, half running and half flying from the supposed source of danger. They understood his warning, which might be interpreted: "Get out of the way, or the stack will fall on you," and immediately obeyed it. We often hear people speak of "dumb animals," a convenient way of expressing ignorance of their language. It would be about as reasonable to call a foreigner "dumb" whose speech happened to be unintelligible to us. Few observers of animals can, I think, doubt that several mammals and birds, to say nothing of insects, can either by voice or gesture convey intelligence to members of their own species. The vocabulary of the common domestic fowl is a particularly extensive one, though we have only succeeded in learning the meaning of a few sounds. The (to us) monotonous prating which fowls make to each other while searching the ground for food may seem perhaps all much the same, but there may be, and probably are, slight variations and modulations of tone too subtle for our dull ears to detect, yet full of significance to them. From its value to man, the unmistakable announcement of the laying of an egg has probably been understood and taken advantage of ever since this useful bird was first domesticated. Begun by the hen, it is taken up and loudly confirmed by the cock, till the important news has been spread far and wide. Then there is the clucking note by which the mother calls her chickens to her, and directs their attention to the worm she has found for them—a sound also used by hens desirous of incubating

Allied to this is the loud rattling call—a sort of hurried and varied clucking, by which the cock calls his hens together to partake of some choice morsel he has found—a scrap of meat, perhaps, or a young frog. This is a remarkable and rare instance of chivalrous and disinterested behaviour in a male bird. It is entertaining to watch his frantic and often long-

continued efforts to attract their attention, and to compare his generous and self-denying action with the selfish greediness of the hens. This vocal summons is aided by much expressive gesticulation. The bird successively holds the tit-bit in his beak, lays it upon the ground, picks it up again, and again puts it down in a fresh place. He seems much gratified at seeing his wives race up fighting and scrambling for the coveted delicacy.

Then, again, there is the loud challenging crow of the cock, varying in pitch and volume according to the size of the performer, and ranging from the deep bass of the Cochin or Brahma to the screaming treble of the warlike little game bantam. After each crow he seems to listen intently for a reply. While watching the lofty bearing of the master cock of the yard, one is often irresistibly reminded of the saying, "There is but a step from the sublime to the ridiculous." As he struts in lordly fashion among his inferiors, with head and tail so erect as almost to meet, he utters a low, subdued note which one can hardly interpret otherwise than as an approving chuckle at his own majestic appearance. There is one remarkable sound made by the domestic cock which I have never heard described or accounted for. He will stand perfectly still for a considerable time, with an anxious expression on his face, as though he had something on his mind. Suddenly he will utter a very loud and peculiar cry, repeated rapidly two or three times, and then at once resume his usual demeanour.

G. T. Rope.

VOICES OF THE TWILIGHT.

THE thrushes are chorusing their evensong as I sit on a fence by a sedgy pool, with my faithful spaniel at my feet, and listen to the rounds of eventide. The partridges are calling their mates and the tawny owl's hoot blends with the "pee-weep" of the green plover and the raucous note of the carrion crow. As the dusk begins to fall the shadowy outline of a fox comes down a furrow and a partridge leaps up in alarm and settles again close to us. "Jock" at command moves on both, but the fox stops to listen some 200 yards ahead before drawing the gorse patch on his way home to the earth, where later on we shall see the cubs playing like kittens on some sunny afternoon. Now comes the chuckling note of approaching wild duck, and with a swish of wings they come right over us and circle round the pool like great flying soda-water bottles, till the old mallard espies a movement, and they shoot upwards out of sight at his warning quacks. Others fly past, though we cannot see them, and the "wheeyouing" notes of the wigeon echo from the gloom as they fly low to join

the half-dozen tufted duck and pochard that have latterly stayed on the Dales Lake. My black spaniel, rolling on his back, brought the former quite close this afternoon and elicited a note of enquiry, "tucker wucker." Nearer the village a vixen is audible—that weird and uncanny sound, half bark, half wail, so common in Northants. The teal are "fluting" round the reservoir; high overhead comes the "wheet, wheet" of the green sandpiper; there is the plash of a coot, and the large shadow is a heron alighting in the brook which feeds the reservoir. An odd snipe or so spring up as we walk up its bank with that crisp note of theirs, and nearing home we hear that sound of the night (which has puzzled so many a bird-lover), "thuck, thuck," over the tower of our lovely church. It is a moorhen going to visit some garden or farmyard in the village, and at times I see them on my lawn in the early morning, though their home-pond is nearly two miles away. Yes, there is something fascinating even in early March in the study of the voices of the twilight. And what of the summer? Ah! one lives again some balmy evening when the moths flutter in the ridings of the hazel-woods, and the silent stroke of the barn owl's wings plays on your face as it passes. We approach a nightjar "whirring" on a pollard stump, and the sound is melodious and full at a few yards' distance, and against the sky we may perchance see one settle crossways on the outer twigs of an oak (as I have done in Sussex). The reeling of the grasshopper warbler, which creeps up the herbage or the blackthorn bush like a mouse and utters its curious note at the top, may be audible, or the babble of the sedge-warbler.

At times, too, some lark or yellowhammer awakes from slumber and treats us to a snatch of song; some belated magpie chatters as we listen for the master-singer of them all—the nightingale. Sad in its commencement, its end is joyous to the full. On all sides it is re-echoed (I have counted fourteen at once in West Sussex) as we homeward go. Only one voice surpasses it—the voice of the woman you love best in the world, and she is asking what you have heard as a wanderer of the night.

Haselbeech Rectory,
Northampton.

W. A. Shaw.

A SQUIRREL AND CAT STORY.

ONE day last year, a boy was roaming the woods near Dunblane, Perthshire, when he found two young squirrels, which had either fallen from the nest or had ventured on their first outing. Boy like, he took them to his home to make pets of them. They were very helpless, their eyes being scarcely opened and evidently unaccustomed to light, and their bodies were covered with a short thick fur. The first difficulty was to feed them, and various expedients

were tried without success. The family cat, however, solved the difficulty. She had had kittens some days previously and was suckling one of them. When the two squirrels were introduced to her she showed no signs of aversion, and when they were placed beside the kitten she freely allowed them access to the teats, and they eagerly took advantage of the opportunity. Henceforth pussy suckled her interesting family of three. The squirrels soon grew very lively, and kept everyone in the house lively too. They would climb curtains, explore shelves and cupboards and run along clothes ropes, rushing hither and thither with quick, eager motions. Their favourite playing place was over the persons of the people of the house, finding, perhaps, the human figure the nearest approach to the natural playing place of young squirrels on the trunk of their native tree. They were absolutely tame, and showed not the slightest fear of man, perching on the shoulders or head, or clinging to the dress of any person, but especially of those in the house with whom they were familiar. The effect of the companionship of the squirrels on the kitten was quite noticeable. She became as wild and venturesome as they, rushing about in their company, and only leaving them when they performed some feat of climbing beyond her ability. The mother pussy would watch their antics with an expression of wistful wonder. After a time the squirrels would eat freely of hazel-nuts, and it was their constant practice to hide these, often in very amusing places: in the pockets, underneath the collar of a jacket, and even among the coils of a lady's hair were favourite spots. Although they had at times the opportunity to escape to the garden and thence to the woods, they did not choose to leave their adopted home. By and by they developed such a taste for tearing paper that nothing was safe from their persistent claws and teeth, and so a home had to be found for them elsewhere. A gardener on a neighbouring estate built a roomy house for them, fitted with branches and everything as like their natural surroundings as could be devised, and there the squirrels still live, having passed their first winter. Kitty has evidently not forgotten her early associates, and she is still the wildest cat of the neighbourhood. M.

REVIEWS AND EXCHANGES.

A Gardener's Year. By H. Rider Haggard. Longmans. Price 12s. 6d. net.

There are no more wholesome fashions among our wealthier classes to-day than the cults of gardens and of birds. Perhaps the taste for orchids and other *bizarre* exotics is a sign that their love of horticulture is not the protest against the general artificiality of life which it might be supposed to be; but any contact with Nature, even in the aviary or the hot-house, is bound to have some humanising influence, to detach a man or woman from complete engrossment in self. Since we, in these pages, were among the first to welcome "Elizabeth and Her German Garden," we have had a host of gardening books, many of which have but exhibited an unreasoning love of garden flowers, their colours, their form

and their perfumes. Mr. Haggard's is, however, like his "Farmer's Year," nothing if not practical. He is proud and fond of the considerable garden domain which has been his for some four-and-twenty years; but he never loses sight of his main purpose, which is to inform his brother and sister gardeners

MARUM GRASS AT KESSINGLAND.
(From "A Gardener's Year." By permission of Messrs. Longman.)

of the details of his experiences during 1903. No gardener is ever likely to achieve much without observation, and the novelist, who must, at least to some extent, be a practical observer of human nature, is, perhaps, therefore, likely to be successful if he betakes himself to the calling of Adam; but, whether he be, or be not, satisfied with his own results, Mr. Haggard is sure to have many careful students. Nor is it only the owners of large gardens who may profit

from his experiences. We note, in passing, for instance, the curious statement that in the course of some fourteen years all the white-flowered specimens of *Fritillaria Meleagris* "have reverted to the original type." We should be glad of an explanation of this, which is not in accordance with our experience. At Elmore Court, Gloucestershire, for instance, where the white form alone was introduced by the late Sir William Guise, the flowers are, we believe, still all white. Is it that the coloured form has increased and the white one died out, or do bulbs which once bore white now bear coloured flowers? The beautiful specimen of the photographic illustrations, which by the courtesy of the publishers we are able to reproduce here, representing the growth of Marram—or, as Mr. Haggard prefers to spell it, Marum—grass at Kessingland accumulating the sand which Lowestoft loses, shows that the author does not narrowly confine his observation to the limits of the garden. We feel for him in his difficulty as to the technical names and their plurals; but we cannot help thinking that he would do better to follow the recognised rules, to spell ordinary specific names such as *grandis*, *cœlestis*, &c., with small initial letters, and to reduce generic names to one letter and not to three or four. C. will then stand for the singular or plural of *Cattleya* or *Cypripedium*, and is generally preferred to "Catts." or "Cyps.," just as the author writes "H. Rider Haggard" and not "H. Rid. Haggard." The get-up of the volume leaves nothing to be desired.

Stories from Natural History. By Richard Wagner. Translated from the German by G. S. Macmillan and Co. Price 1s. 6d.

This excellent little book is precisely what its title indicates, nearly eighty

GEESE. (From a photograph by Charles Reid. By permission of Messrs. Macmillan.)

stories of animals of all classes, of important plants, such as cotton and tea, and even of the mineral world, as represented by a roof-tile or a phosphorus-match.

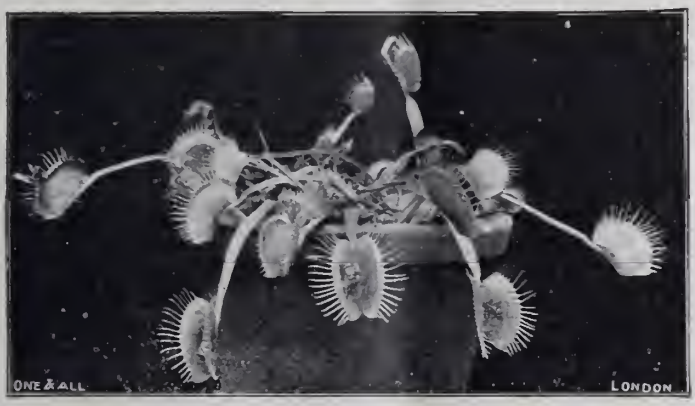
They are not fables, but simple stories of the facts of Nature, so plainly told that the children may read them for themselves, and so suggestive as to set the reader pondering on what are in fact some of the most profound problems in biology. The hidden science is all thoroughly accurate ; but there is no technicality to repel. There are numerous excellent photographic illustrations by Charles Reid and W. P. Dando, one of the former of which Messrs. Macmillan have kindly lent for reproduction ; but the few engravings from drawings are not particularly good. So skilful is the translation that the German origin of the book is chiefly revealed by the triumphant shooting of a fox by a keeper.

The Case for Whitgift's Hospital. By J. M. Hobson, M.D., B.Sc. Published by the Croydon Antiquities Protection Committee. Price 3d.

We have often briefly alluded in these pages to the threatened destruction of the most interesting building in Croydon ; but in this capital little *brochure*, Dr. Hobson has reprinted from the *Croydon Guardian* an eminently readable exposition of the whole argument for the preservation of Archbishop Whitgift's foundation, at a length for which we have unfortunately not the space. The author tells the story of the Hospital, comparing it to its predecessors and to its imitations, Abbott's Hospital at Guildford, Sir Thomas Sutton's foundation at the Charterhouse, and Sackville College, East Grinstead : he describes its architecture, of which the oak overmantel, is perhaps the gem ; and finally he tells the story of the proposed demolition. "Consequent upon what happened in 1897, the Croydon Antiquities Protection Committee sprang, hydra-like, from the side of the Selborne Society" ; and, besides mere protests against the threatened vandalism, that body has been instrumental in suggesting several perfectly practicable alternative schemes, maps representing which are among the eight illustrations to the present pamphlet."

One and All Gardening, 1905. Edited by Edward Owen Greening. Agricultural and Horticultural Association. Price 2d.

What can we say about this marvellous production? Two hundred pages of interesting and practically useful matter, comprising some forty articles by such gardeners as Mr. Dean, Mr. Wright and the late D. T. Fish, illustrated by 150 photo-engravings and woodcuts, make this tenth issue fully equal to its wonderful



DIONŒA MUSCIPULA. (From "One and All Gardening, 1905." By permission of E. O. Greening, Esq.)

predecessors. We have come to look forward to the popular botanical articles by the Hon. H. A. Stanhope and Mr. James Scott, one of the illustrations to the former of which we are permitted to reproduce here ; but the amateur gardener will find the whole volume readable from cover to cover.

East Kent Scientific and Natural History Society: Report and Transactions for 1904.

This quarto double-columned report of a Society in its forty-seventh year of being gives a full account of its proceedings and papers. Photography occupies an important place in these, and most of the Society's work is commendably local. A meteorological record and notes on mosses and lepidoptera appear side by side with a history of the Canterbury monastery and a paper on pilgrim signs.

The Field Naturalists' Quarterly for December, completing vol. iii., is a first-rate number. The Editor, besides continuing his series of papers on British Field Zoology by one on Parasitism, begins a series of Modern Studies in Heredity; Dr. P. J. O. Minos gives an account of Coggeshall Church, excellent, if perhaps rather out of place; Mr. H. E. Forrest writes on British Bats; and there are several other good articles and some exceptionally fine plates.

The Antiquary. New Series, Vol. i., No. 1, January. Elliot Stock. Price 6d.

We congratulate our contemporary on the way in which it commences the second quarter-century of its useful existence. Each number is now to be eight pages longer, and the present number gives us certainly a very varied bill of fare. Mr. Charles Dawson writes on Old Sussex Glass; Mr. Lynam gives us a well-illustrated paper on Lapley Font; the Rev. W. J. Loftie discourses on London street names, and Mr. T. Sheppard describes the Roman remains found near Spurn Head.

The Nature-Study Review, Vol. i., No. 1. January, 1905. 525, West 120th Street, New York. Price 20 cents.

This new bi-monthly candidate for favour testifies by its long list of collaborators, two only of whom—Professor Miall and J. A. Thomson—are British, to the wide-spread interest in Nature-study among American teachers. Judging from its articles, and especially from an outline "Guide to Periodical Literature" which it contains, Nature-study would appear to be all but non-existent beyond the confines of the United States.

Received: *The Plant-World* and *The American Botanist* for November; *Our Animal Friends*, *The Victorian Naturalist* and *The Wilson Bulletin* for December; and *The Naturalist*, *The Irish Naturalist*, *Nature-Study* (Lockwood), *The Animals' Friend*, *The Animal World*, *The Humanitarian*, *The Agricultural Economist*, *The Estate Magazine* and *The Commonwealth* for January.

NATURAL HISTORY NOTES.

208. Weasel Attacking Chickens.—One morning while feeding my chicks of various ages, I was startled by cries of alarm from one at a distance. As it was in long grass I could not at first see it, but I dropped my bucket and ran to the spot whence the cries came. I was surprised to see one of my chicks being dragged along by a weasel, which held it by its breast, in spite of its struggles. When the weasel saw me it let go of the chick and ran to a bank. I made after it, but it darted into a hole, at the mouth of which I found three dead chicks with their heads and part of their bodies eaten away.

Church Farm,
West Dean.

MORLEY BROWN.

209. Black-headed Gulls.—In the "holy valley" of the Nar, where I reside, close to the noble ruins of Castle-acre Priory, one of the most beautiful and interesting spots in the Eastern Counties, black-headed gulls are very common. They may be seen daily, often by the hundred at a time, and are almost as much wedded to our large open fields as to the sea-coast. They often follow the plough, and feed on the different caterpillars, grubs, and other creatures that are exposed in the newly-turned furrow. Among young turnips they do much good by devouring the farmers' greatest insect enemies, and altogether are very useful birds.

One sunny morning last summer I spent half an hour watching these birds, in a most enchanting spot. Immediately in front of me, and at the foot of the hill some 60 feet below, lay the River Nar, with the valley opening out towards my little village. On the close-cropped turf near the river-side a large number of black-headed gulls were basking in the sunshine: some were bathing in the stream, or floating idly on its surface, while a single bird soared round and round above me till almost lost to sight in the clear blue vault of heaven. Suddenly they all rose together, and as I wondered at the cause a heron slowly glided along a few feet above where they had been, and proceeded to catch a trout in the river for his mid-day meal. The moment he had passed they settled down again and I left them undisturbed.

During the half hour that I watched the gulls that morning the following water-loving birds came under my observation: kingfishers, redshanks, green sandpipers, mallards, gadwall, moorhens, dabchicks, herons, snipe, all in peace and happiness, for they felt they were secure.

Southacre, Swaffham. EDMUND THOS. DAUBENY.
January 7, 1905.

210. **Enemies of Bees.**—In reference to the paragraph on the above subject in your issue of December last, I have frequently seen house-martins make a dash at bees, when flying to or from their hives, but I much doubt if they really took them, as on coming to close quarters they seemed to think them best left alone. I have also seen a spotted flycatcher act in a very similar manner. We had much more trouble one winter with a great titmouse (*Parus major*) which would alight at the entrance to the hive, and persistently tap till a bee made its appearance, when it was instantly killed and carried off. His depredations had to be finally stopped by the gun.

Byfleet, JNO. FITZWATER.
January 9, 1905.

211. **Tapping.**—Some years ago in an old Dorset farmhouse I used often to notice the "death-watch" tapping behind the fans on the mantelpiece. But there was at times a much louder tapping on the oak beam over my bed, which was bored, as Mr. Daubeny describes; at last I managed to pill-box the performer, a large weevil, and observed it in the act early next morning.

Northants Natural History Society. W. A. SHAW.

212. While what my friend, Mr. Hastie, says regarding the sounds sometimes heard to proceed from furniture, the wood of which suddenly expands and contracts as the result of atmospheric conditions and goes off with a loud bang, is quite true, it is a well-known fact that the tapping resembling the ticking of a watch, heard in old bedrooms, is caused by a minute beetle, or rather by several species of the genus *Anobium*. Anyone who takes the trouble may observe how these insects produce the sound. Raising themselves on their hind legs, very much as a woodpecker taps the bark of a tree with its beak, they strike their horny heads quickly and with considerable force for such tiny insects, against old books, wooden panels, or the plaster of a wall. Thus, to the superstitious,

"The solemn death-watch clicks the hour of death."

Nor is the Death-watch the only insect which alarms such minds. In our old West-country village, where many such-like olden fancies linger to this day, the beautiful Death's-head Hawk-moth (*Acherontia atropos*), largest of British moths, which in its larval state feeds upon the leaves of the potato and the nightshades, is similarly looked upon with dread. On account of the skull-like marking on its thorax and the weird and plaintive cry it sometimes makes when captured, the old people there say that this insect was never made by the Creator, but came into existence by the agency of the Devil.

41, *Heath Street, Hampstead.* J. E. WHITING.
December 9, 1904.

213. **Honey Dew.**—I must own to holding the "orthodox view" that honey dew is the excretion of aphis, scale, and perhaps some other insects that live on the juices of trees and plants. It is deposited on the foliage that is turned uppermost, and sometimes overflows the surface on which it has fallen. A colony

of aphis or scale is to be found directly over the spot where it occurs, at a distance it may be of an inch or two, and it may be of many feet. When on a leaf aphides resort to the under side, which will be free from honey dew; and anything immediately below will be glazed on the upper side by the sweet, sticky matter squirted from the two nectaries or cornicles on their backs peculiar to their tribe. If honey dew were produced by the "ordinary processes of over turgescence pressing the liquid through the water pores," both sides of the leaf would secrete it. Cabbages are often smothered by aphis. If a cabbage leaf be glazed all over with honey dew, as if dipped in a thin varnish, without the presence of aphis, and there be no tree overhead, then the leaf itself must have exuded it; but that cabbage leaf has yet to be found. The juice of a plant, after passing through the stomach of the aphis, acquires the peculiarities of honey dew, irrespective of the properties of the plant on which the insect feeds. In the case of the cuckoo-spit insect the juice of the plant becomes watery froth after passing through its body.

With the exception of the locust itself, the aphis is the most destructive insect in the world.

EDMUND THOS. DAUBENY.

214. Tradescant's Garden at Lambeth.—I possess among my book-treasures a little octavo volume, entitled "*Musæum Tradescantianum:* or a collection of Rarities, preserved at *South Lambeth*, near *London*. By John Tradescant." London: 1656. The copy in question of this somewhat scarce work was formerly the property of Peter Collinson, F.R.S., who would seem, from internal evidence, to have been himself a botanist and a collector, for he has enriched the little book with many marginal notes, some of which appear to me to contain matters of interest. On the blank part of p. 178, he has written: "In May, Dr. Watson and severall of the R. Society visited Tradescant's garden, Anno 1749, to see what plants was left. Found Two, the largest Arbutus may be 120 years, in the Orchard. Rhamnus Catharticus 20 foot high a foot diam. The First Tree of Virginia Cypress lately dead, which they rem(em)bred living. Ground Plants—

Borago latifolia sempervirens, C. B
Polygonatum vulgare Latifolium, C. B
Aristolochia Clematis recta, C. B
Dracontium Dod.

"The House and Garden was in the further end of South Lambeth, on the left hand side of the Way going to Stockwell." In another note on p. 144, Collinson writes: "Three flowere yet retain Tradescant's name, viz., Tradescant's Aster, Tradescant's Daffodil, Tradescant's Spiderwort from Virginia, all in my garden, P. Collinson, 1763." He calls special attention to the fact that Tradescant had the horse chesnut tree in 1656, and he remarks, under date of October 20, 1756, "Anno, 1656, but few Auriculas, only Two with Striped Flowers, and now Anno, 1756, they are without number. Such variety since his time has been raised by seed and indeed in my memory 50 years agone there was but few striped." There are many other jottings as to colours of flowers and more modern names appended to Tradescant's catalogue, but they do not seem to justify quotation. On p. 41 there is a catalogue entry: "A Booke of Mr. Tradescant's choicest Flowers and Plants, exquisitely limned in vellum, by *Mr. Alex. Marshall.*" Mr. Collinson adds: "May 6, 1757, the above painted Vellum Book is in the Museum at Oxford, but ye spelling as well as painting shows wee are much improved." Tradescant's collection, as is well known, was the first cabinet of natural curiosities formed in England, and it constituted the nucleus of the Ashmolean Museum at Oxford. I have a note as to one Peter Collinson, probably the son of the writer of the foregoing particulars. It is a catalogue entry as follows: "Dillwyn (L. W.) Hortus Collinsonianus, an Account of the Plants cultivated by the late Peter Collinson, Esq., F.R.S., at Mill Hill, near Hendon, arranged alphabetically, according to their modern names, 8vo, Swansea, 1843."

GILBERT R. REDGRAVE.

[The "Musæum Tradescantianum" is, as Mr. Redgrave says, scarce, especially with the portraits engraved by Hollar; but Peter Collinson's copy, with his MS. notes, is indeed a treasure, which we should like to see; and we think it

probable that all the marginalia may be worth printing. As Mr. Redgrave does not seem to know much about the annotator, of whom, by the way, there are accounts in the "Dictionary of National Biography" and in Britten and Boulger's "Biographical Index of British and Irish Botanists," a few notes upon him may not be out of place. He was born apparently in St. Clement's Lane, Lombard Street, January 14, 1694, was a woollen-draper and a member of the Society of Friends. He was elected F.R.S. in 1728 and F.S.A. in 1737. Previous to 1749 he had a garden at Peckham, and in that year he settled at Mill Hill, where his house and garden, afterwards tenanted by another botanist, Richard Anthony Salisbury, now form part of the well-known public school. No one in his time did more than he for the introduction of foreign plants and seeds, especially from America; and there is in the Botanical Department of the British Museum an unpublished manuscript by him on this subject. He corresponded with Sloane, Dale, Catesby, Derham, Woodward, Bartram, Franklin, and Linné, and contributed various papers to the "Philosophical Transactions" and to the "Gentleman's Magazine." He died in London, August 11, 1768, leaving an only son, Michael. An account of Collinson, with a portrait, was printed by Dr. Fothergill, in 1770, and this portrait also illustrates an account in Nichols' "Literary Anecdotes," vol. ix. Michael Collinson died in 1795 at the Chantry, Ipswich, and Dawson Turner, in the "Richardson Correspondence" (p. 401), records the sale in 1834 of the library of the late Charles Collinson of that place, probably the son of Michael, the books being chiefly those of Peter Collinson. Among them was his copy of Catesby's "Carolina," bound in Russia and illustrated with twenty-two original drawings by George Edwards, Ehret, and Bartram. In it Peter Collinson had written: "This copy of this noble work is very valuable; as it was highly finished by the ingenious author, who, in gratitude, made me this present for the considerable sums of money I lent him without interest, to enable him to publish it, for the benefit of himself and family; else, through necessity, it must have fallen a prey to the booksellers." This copy sold for £15 10s. and was soon after in the library of Aylmer Bourke Lambert, F.R.S., which was dispersed after his death in 1842. Where is it now? Sir William Watson's visit to Tradescant's garden was described by him in vol. xlvi. of the "Philosophical Transactions"; and, of course, Dillwyn's "Hortus Collinsonianus" refers to the owner of Mr. Redgrave's book and not to a son of his. Can Mr. Redgrave give us any account of how his treasure has changed hands?—ED. *N. N.*]

NATURAL HISTORY QUERIES.

42. Rooks.—A correspondent sends us the following letter from the *Times* with the enquiry whether this habit of rooks is well known.

"Sir,—The table of precedence of birds, as your readers interested in such subjects are, no doubt, well aware, has, since the days of Bishop Stanley, been revised in the democratic spirit of modern science. Brains are now placed above beak and claw.

"The 'low foreheaded tyrants' who in less enlightened days were allowed to usurp the place of honour, have been ejected to make room for artisans and musicians.

"In the latest classifications the 'passeres' by common consent rank first. Among the 'passeres' the highest place is given to the 'corvidæ,' and among these a high place is filled by the homely rook.

"I have received from a correspondent in North Wales—a high Church dignitary—a small potato, with a story attached to it which, if it could be accepted as proved, would, I think, still further advance the reputation which these strange birds already possess for almost human intelligence. I will, if I may be allowed to do so, repeat the story, as told to me, without further note or comment.

"Close by my informant's rectory is a large rookery. Twice a year—in the breeding season and again when, as their laws require, the birds reassemble to carry out repairs before the winter storms begin—the ground beneath the nests is

strewed with small potatoes, all, he assures me, of about the same size, 'in the form of eggs,' and 'showing no signs of having been pecked at.'

"The explanation given by an old parishioner is that the rooks use potatoes for measuring the insides of their nests, to satisfy themselves by practical experiment that they are neither too large nor too small to hold the eggs comfortably, and that, when they have done this, they 'chuck them away.' The potato sent to me is, my reverend informant tells me, 'a typical form.' It was picked up the morning he posted it 'beneath an aged oak-tree on which the rooks had been recently repairing their nests.' 'In the early spring,' he writes, 'there are heaps of them beneath the trees. . . . The birds never carry them away again, which they would do if they were brought them for eating purposes.'

"I have compared my potato with a series of rooks' eggs, and find that, though less pointed, its measurements agree, in length exactly and in girth very closely with those of the eggs.

"It is sad that no prophetic voice can be raised to warn the rooks of the gathering clouds that threaten them. With the growth of artificial pheasant rearing, temptations to egg-stealers have grown and are proving, if hostile witnesses are to be believed, too strong for the honesty of many of the family.

"Gamekeepers are influential, and, with honourable exceptions, unforgiving when the offence is against pheasants. In the crusade already begun the good deeds of the farmer's friend.'

"'Crushing the beetle in his coat of mail
And crying havoc on the slug and snail,

are forgotten.

"'The evil that birds as well as men do lives after them.
The good is oft interred with their bones.'

"Your obedient servant,

"5, *Ovington Gardens*, "T. DIGBY PIGGOTT.
"*December* 26."

43. Swifts and Cockchafers.—Is it a well-known fact that swifts prey upon large coleoptera? On two occasions last summer I noticed them taking cockchafers.

Cairncross, Stroud, R. H. ROGERS.
January 19, 1905.

SELBORNE SOCIETY NOTICES.

[NOTE.—ALL ANNOUNCEMENTS WITH REGARD TO MEETINGS OF THE CENTRAL SOCIETY OR BRANCHES WILL BE FOUND TOGETHER AT THE END OF THESE NOTICES.]

New Members.—*Central Society*—Francis L. Berry, Esq., St. James's Street; George Brooks, Esq., New Southgate; G. Page Cawthorn, Esq., Pirbright; B. T. Lowne, Esq., Catford; Kenneth W. Mumford, Esq., Westcombe Park; Miss Edith Poole, Miss Winifred Poole, Seaford.

Birmingham Branch—Miss G. Harold, Mrs. Allan Tangye, Miss Youngerman, Birmingham.

Brighton Branch—Charles A. Creifer, Esq., Arundel; Mrs. Nicholson, Brighton.

Croydon Branch—Miss Dorothy Meihé, Miss A. E. Willson, Streatham.

Ealing Branch—Miss Grout, Richmond.

Hampstead Branch—Miss Winifred E. Bell, Gospel Oak; Edward Bolus, Esq., Mrs. Bolus, Stoke Newington Common; Miss Bessie Clissold, H. P. Cooper, Esq., Mrs. S. M. Cooper, F. Falkenheim, Esq., Hampstead; Miss Lucy Holmes, South Hampstead; Miss K. W. Kinns, Wood Green; Mrs. Temple Moore, Myer S. Nathan, Esq., Miss D. Parsons, Hampstead; Miss C. A. M. Pearce, Camden Road; Henry Wilkins, Esq., Hampstead; P. Macleod Yearsley, Esq., F.R.C.S., F.Z.S., Wimpole Street.

Subscriptions.—The Council has pleasure in acknowledging subscriptions of more than 5s. from the following members: Mrs. E. Brightwen, F.Z.S., F.E.S., £5; Miss Ellen S. Lomer, £2; Miss C. Alston, £1 1s,; J. S. Budgett, Esq., £1 1s.; Miss A. Garrett, £1 1s.; Mrs. Annie Jones, £1 1s.; Miss E. Nicholl, £1 1s.; the Hon. Walter Rothschild, £1 1s.; C. Surgey, Esq., £1 1s.; W. J. Carver, Esq., £1; Mrs. Hubbard, £1; Mrs. S. D. Lomer, £1; Miss L. Marshall, £1; Mrs. Robinson, 10s. 6d.; Cosmo Blore, Esq., 10s.; Miss Brodrick, 10s.; F. S. Clayton, Esq., 10s.; R. Evans, Esq., 10s.; A. J. Evelegh, Esq., 10s.; A. J. Hall, Esq., 10s.; Claude Leatham, Esq., 10s.; W. W. Maw, Esq., 10s.; G. B. Milne Redhead, Esq., 10s.; Miss Ellen Shadwell, 10s.; R. F. Sturge, Esq., 10s.; Mrs. Turle, 10s.; C. W. Ware, Esq., 10s.; A. Culshaw, Esq., 7s. 6d.; Rev. E. F. Russell, 7s. 6d.; W. Percival Westell, Esq., 7s. 6d.; C. Michael Hall, Esq., 6s.; North Middlesex Junior Branch, 6s.

Library.—The Honorary Librarian will attend at 20, Hanover Square, from 6 p.m. to 6.30 p.m., on the evenings when the Publications Committee meets (at present on each second Monday in the month), for the purpose of issuing books to members. The regulations and a first list of books contained in the Library will be found on page 40.

The Honorary Librarian has pleasure in announcing the following gifts to the Library of the Society: "Birds by Land and Sea," by J. Maclair Boraston, given by the Editor; Album of Photographs taken at the Field Club Rambles, given by J. Shaw Crompton, Esq., R.I.

SELBORNE SATURDAY AFTERNOONS.

January, 14. *Gray's Inn.*—Bright sun, and wind with an edge like a razor, greeted the fifty Selhomians as they assembled outside the chapel in Gray's Inn Square. Here they were met by Mr. M. D. Severn, the Inn's Librarian, who very kindly acted as guide. Crossing to the Gardens, laid out by Francis Bacon at considerable cost nearly three centuries ago, rooks were seen perched in the trees, and noisily discussing parochial affairs and possibly, too, the coming nesting. The pride of the Inn are these dusky sentinels, themselves the depository of so much bird tradition. Bacon is credited with having planted the old Catalpa tree, which was duly inspected, but as readers of NATURE NOTES are already aware, from researches conducted by the Editor, there is every reason to disbelieve the statement.

The chapel, Mr. Severn explained, stood on the site where once had worshipped the Grays of Wilton, long before Gray's Inn became an Inn of Court. There is no relic of those far-off days save references in the records to a litigious chaplain in 1400 and in Tudor times to one "Sir Jeffery the Priest," who received £4 13s. 4d. a year for "Keepinge of the clocke." With Henry VIII., the chapel's holy vessels disappeared; with Mary they were replaced, to vanish again when Elizabeth became queen. Benchers were accommodating, since they seem to have loyally observed the religious mutation. There were curious incidents in those times. One member of the Inn made involuntary acquaintance with the Tower for not attending Divine Service, while in 1694, the chapel clerk, having a grudge against some of the Benchers, locked them in their pews and temporarily decamped with the key. In 1623, for some reason or other, it was ordered that "woemen are barde the chappell att sermons." There was a restoration in 1698, but the chapel was transformed into the present edifice eleven years ago, when some Tudor windows, previously covered with plaster, and a holy-water stoup were discovered. The present east window is quite modern and commemorates Becket, Whitgift, Laud and Juxon, the last three having been members of the Inn.

Mr. Severn's address in the Hall was one of singular interest. The building was completed in 1560, and cost about £4,000 of our money. Its roof and screen are superb, and there is some old glass, though it is much damaged. Curious were the ancient customs disclosed by Mr. Severn's remarks. In Elizabeth's reign the students used to be aroused by my Lord Berkeley and other quondam John Peels on their way with horns and hounds to hunt in adjacent fields. Then the students and city apprentices quarrelled, and no douht thwacked and banged one another in regulation manner. All members of the Inn slept in it, and

accommodation was scanty. In 1520 the Speaker of the House of Commons wrote to the Benchers that he would accept of the Attorney-General as his bed-fellow. For the students it was a paternal government, seeing that the Benchers not only regulated their clothes but also the length of their beards. Only certain officials could marry; the rest had either to be celibates or to relinquish their wives. There was an exercise called "Moots" performed under the supervision of the chief butler, who on one occasion was put in the stocks for over-zeal. By a proclamation of Burghley, the painting of Queen Elizabeth's portrait was forbidden till someone could be found to do justice to her "natural beauty, grace and favour."

Masques and revels were numerous, but the most famous entertainment was the production in the Hall of Shakespeare's "Comedy of Errors," in 1594.

The Selbornians were subsequently entertained to tea, and on its conclusion most hearty thanks were voted to the Benchers for their hospitality and to Mr. Severn for his paper and invaluable services as guide.

NEWS FROM THE BRANCHES.

Clapton.—*January* 21.—The usual monthly meeting of this Branch was held at Sigdon Road School, Hackney Downs, Mr. R. Marshman Wattson in the chair. A paper was read by Mr. Ernest A. Nash, a Vice-President of the Branch, and was entitled "Some Legendary Explanations of Natural Markings in Living Nature." The paper, Mr. Nash said, would necessarily be a short one, as in limiting his remarks to "living Nature" he had found himself in a very restricted and comparatively unworked field of research. Under the two headings, Animal Kingdom and the Vegetable World, he had gathered with some difficulty a number of interesting and little-known examples. From the Animal Kingdom Mr. Nash related some legendary explanations of the dark cross on the back and forelegs of the Ass; of the peculiar way in which the mandibles of the Cross-bill cross each other, and of why the Robin has a red breast. Legends of a similar type were selected from the Vegetable World, relating to the Blessed Thistle (*Carduus benedictus*), Wild Arum (*Arum maculatum*), Aspen (*Populus tremula*), and several others. Many of the legends were connected with our Blessed Lord and His Passion. The paper was concluded with a quotation from Robert Turner, a mediæval herbalist: "God hath implanted upon the plants, herbes, and flowers, as it were in hieroglyphics, the verie signature of their vertues."

A vote of thanks was accorded to Mr. Nash for his valuable and interesting paper.

Hampstead.—The Committee of the Branch has pleasure in acknowledging subscriptions of more than 5s. from the following members: Andrew J. Lloyd, Esq., £1; Cecil Clarke, Esq., 10s.; Miss Ross, 10s.; David Ross, Esq., 7s. 6d.

For some time a small society known as the "Birds' Friends," has existed for feeding the birds on Hampstead Heath during the winter. The work was carried on under the direction of Mrs. Thompson, a member of the Selborne Society, but owing to her removal to Finchley, the duty of helping to provide for our feathered friends is being taken over by the Hampstead Branch.

On *January* 16, Mr. Oliver G. Pike, the well-known ornithologist, gave his promised lecture to the members of the Branch. Notwithstanding the blizzard that was blowing there was a very fair attendance. Space forbids any attempt even to outline the lecture, but one or two remarks are necessary. Mr. Pike described the camera which he used for his work and the many ingenious devices to which the photographer had perforce to resort to obtain his pictures. Not the least qualification for such work is patience. With regard to the sedge warbler, sometimes confounded with the nightingale, one had only to make a noise in its immediate vicinity, and the bird would sing at almost any hour, day or night. Thrushes, robins, skylarks, wood pigeons, now tame in London, warblers, water birds, tits, and many others figured upon the screen amid almost continuous applause. A marsh tit had refused to budge, and in order to photograph the nest it had to be gently removed by hand. Among other curious quarters for nesting which some birds affected was an exploded lyddite shell, in which a wheatear

had made its home. Mr. Pike took his audience to Wales, as well as to the Bass Rock and other inaccessible places, though he by no means neglected the environs of his own home at Winchmore Hill. Some splendid pictures in colour photography brought the lecture to a close.

Mr. A. Holte Macpherson, M.A., occupied the chair, and upon his motion, seconded by Mr. J. E. Whiting, heartiest thanks were voted to Mr. Pike for his address.

FORTHCOMING EVENTS.

Central Society.

Business Meetings.—The next meeting of the Council will be held on Tuesday, February 28, at 5.30 p.m., and the Publications Committee will meet on Monday, February 13, at 5.30 p.m.

Selborne Saturday Afternoons.—*Saturday, February* 11. Visit to Vintner's Hall, Upper Thames Street (near Southwark Bridge). Assemble at 3 p.m. punctually. *N.B.*—Members only.

Saturday, February 25.—Visit to Lambeth Palace by kind permission of His Grace the Lord Archbishop of Canterbury, Vice-President of the Selborne Society. Meet Mrs. Percy Myles at the *principal entrance* near the Parish Church at 2.15 p.m. for 2.30. The Archbishop has kindly undertaken to provide the Guide. As the numbers are limited, members will have precedence.

Branches.

Clapton. — *February* 18. Architectural paper, with lantern illustrations. Mr. S. Austin.

Hampstead.—On February 6 a geological lecture will be given at 8.30 p.m. at the Subscription Library, Prince Arthur Road, Hampstead, by Mr. William Whitaker, B.A., F.R.S., entitled "The Hammerer and the Camera, with Illustrations." The chair will be taken by Mr. M. Yeatman Woolf.

Mr. R. Garraway Rice, F.S.A., will give a "Lantern Exhibition of Buildings and Places of Archæological Interest" at the small Hall, Town Hall, Haverstock Hill, N.W., on Tuesday, February, 28, 1905. The chair will be taken at 8.30 p.m. by Mr. W. Paley Baildon, F.S.A.

ANSWERS TO CORRESPONDENTS.

H. R. M. B.—In addition to the books mentioned last month, you might find "Cultivated Plants, their Propagation and Improvement," by F. W. Burbidge (Blackwood's), price 12s. 6d., of use.

NOTICES TO CORRESPONDENTS.

1. All communications for NATURE NOTES must be authenticated with name and address, not necessarily for publication.

2. The return of an unaccepted contribution can only be guaranteed when it is accompanied by a stamped and addressed envelope. We cannot undertake to name specimens privately, to return them, or to reply to questions by letter.

3. All communications for any number must be in the Editor's hands by the 10th of the preceding month.

4. Communications for NATURE NOTES, books for review, specimens for naming, &c., should be addressed to the Editor, PROFESSOR BOULGER, F.L.S., F.G.S., 11, Onslow Road, Richmond, Surrey.

5. For the supply of the Magazine to others than members, or for back numbers (except in the case of new members), address the publishers, with stamps at the rate of 2½d. per number, Messrs. JOHN BALE, SONS AND DANIELSSON, Ltd., 83-91, Great Titchfield Street, London, W.

6. Letters connected with the business of the Society, subscriptions, and applications for membership, should be sent to the local Honorary Secretary, or to the Honorary General Secretary of the Society, WILFRED MARK WEBB, F.L.S., at 20, Hanover Square, London, W.

BOOKS IN THE LIBRARY OF THE SELBORNE SOCIETY.

Regulations with Regard to the Borrowing of Books.—Any member of the Society is entitled to borrow one book at a time, and to retain it for one month.

On payment of postage both ways members may receive their books by post, but letters can only be dealt with on the days when the Honorary Librarian attends at 20, Hanover Square, namely, the second Monday in the month.

A. L. H. A. Notes from a Lincolnshire Garden. (1903)
Aplin, O. V. Birds of Oxfordshire. (1889)
Avebury, Lord. On Buds and Stipules. (1899)
Barber, S. Beneath Helvellyn's Shade. (1892)
,, The Cloud World. (1903)
Beddard, F. E. Animal Coloration. (1892)
,, ,, Structure and Classification of Birds. (1898)
Benson, Rev. C. W. Our Irish Song Birds. (1901)
Berger, E. Plantes Potagères. (1893)
Boraston, J. M. Birds by Land and Sea. (1905)
Brehm, Dr. A. E. Bird Life. (1874)
Brightwen, Mrs. E. Inmates of My House and Garden. (1895)
,, ,, More about Wild Nature. (1893)
,, ,, Quiet Hours with Nature. (1904)
,, ,, Wild Nature Won by Kindness. (1893)
Campbell, J. M. Notes on the Natural History of the Bell Rock. (1904)
Cecil, Lady Wm. Bird Notes from the Nile. (1904)
Clark, Wm. British Marine Testaceous Mollusca. (1855)
Clinch, Geo. Kent (The "Little Guides" Series). (1903)
Compton, Theodore. A Mendip Valley. (1893)
Comstock, A. B. Ways of the Six-footed. (1903)
Cooke, M. C. A Fern Book for Everybody. (1889)
,, ,, Our Reptiles and Batrachians. (1893)
Cresswell, B. F. The Quantock Hills (Homeland Handbook). (1904)
Creswell, W. G. The Hygiene of Bird Keeping. (1904)
Dallas, W. S. Elements of Entomology.
Dean, Alex. Vegetable Culture. (1896)
Dixon, Chas. Among the Birds in Northern Shires. (1900)
,, ,, Birds' Nests. (1902)
,, ,, Migration of Birds. (1892)
Earle, J. English Plant Names (Xth-XVth Centuries). (1880)
English, Douglas. Photography for Naturalists. (1901)
,, ,, Wee Tim'rous Beasties. (1903)
Fountain, Paul. Great Deserts and Forests of North America. (1901)
Fountain, Paul. The Great North-West and the Great Lake Region of North America. (1904)

(*To be continued.*)

Nature Notes:

The Selborne Society's Magazine.

No. 183. MARCH, 1905. Vol XVI.

OBJECTS OF THE SOCIETY.

To promote the study of Natural History. To preserve from needless destruction such wild animals and plants as are harmless, beautiful, or rare. To discourage the wearing and use for ornament of: (1) The skins and furs of such animals as are in danger of being exterminated; (2) the skins and plumage of such birds as are not domesticated. To protect places and objects of natural beauty or antiquarian interest from ill-treatment or destruction. To afford facilities for combined effort in promoting any of the above or kindred objects.

SELBORNIANA.

Gilbert White's Letters.—Some original letters by the Selborne naturalist are to be offered for sale by auction during the month. We would suggest that—after the members of the White family—the Selborne Society is the most fitting depository of all such relics of its eponymous hero. We have at present a very meagre representation in our library of the many editions of his immortal work, and little beyond one sermon and a tailor's bill by way of manuscript remains; and we would, therefore, appeal for special subscriptions to a fund for the purchase, in the first instance, of some, or all, of the letters now for sale, and subsequently of any mementoes, printed or otherwise, of Gilbert White, for preservation as part of the property of the Society. Donations towards this "Gilbert White" Fund may be addressed to the Hon. Secretary, 20, Hanover Square, or to the Editor, 11, Onslow Road, Richmond, Surrey.

Telephone Poles.—As announced in our last issue, the deputation on this subject waited upon Lord Stanley, the Postmaster-General, on Thursday, January 26. It was introduced

by the Right Hon. G. Shaw Lefevre, a former Postmaster-General, who was followed by Mr. E. North Buxton, Verderer of Epping Forest, Lord Farrer, and others. In the unavoidable absence of our President, Lord Avebury, who, it had been hoped, would have spoken, the Society was represented by the Honorary Secretary and the Editor. The Commons and Footpaths Preservation Society, the Kyrle Society, the Metropolitan Public Gardens Association, and many local County and District Councils were represented. It was urged that in no case should poles be erected over commons, and that the Postmaster-General should lay it down as a principle that, where alternative routes were possible, the presumption should be against the wires being carried across any place of natural beauty.

Lord Farrer said the first case of this kind of any importance was in 1875 or 1876, when trees were felled in order to take a telegraph wire for political reasons to a residence of the late Lord Granville. Shortly afterwards he remembered going for a ride with Lord Granville, and in passing the spot his companion said: "I wonder whether the peace of Europe, which was to be preserved by that telegraph wire, was worth those beautiful beeches."

Lord Stanley, in reply, expressed himself in full sympathy with the deputation, and assured them that the Commons clause would be omitted from his Bill when reintroduced during the coming session. He emphasised, however, the necessity the Post Office was under of considering economy, and the absence of any power to compel private owners to allow the wires over their land. He also pointed out that, though telegraph wires could be carried underground, trunk telephone wires to any considerable distance could not be so conveyed, owing to induction. Writing to Mr. Shaw Lefevre on February 9, the Postmaster-General announces that he will not press the proposal to carry wires across Epping Forest or along the New Epping Road.

The Point of View.—Tastes certainly differ; but we have been so gratified of late years by the general tone of the daily Press on all those matters concerning the amenities of country life with which our Society is mainly interested, that any utterance of a different character comes upon us as a shock. When the *Daily Graphic* for January 26 writes that: "often along a country road the telegraph poles are by no means a disagreeable object"; and when the *Standard* for February 8 says that "edicts against egg-taking . . . . tend to check the growth of that love of natural history among peasant children which it is so desirable to encourage," we can only console ourselves with the recollection:

"Quandoque bonus dormitat Homerus."

The Avon Gorge.—The *Times* for February 7 contained so admirable an exposition of the whole case as to the preservation

of the natural beauty of the gorge of the Avon, below Bristol—or what is left of it—that we cannot refrain from quoting some of the leading paragraphs of the article in question.

The one remarkable feature of a somewhat grimy city is the gorge (the word conveys no exaggeration) through which the Avon forces its way, but a short distance below the wharves and quays of trading Bristol. A turn of the river, a mile or so of the flowing tide, and all the associations of a town are left behind, and the stream glides between high cliffs—on the one side precipitous walls of bare limestone, on the other steep slopes covered, almost to the water's edge, with hanging woods; but, alas! to be accurate one should speak in the past tense. There are ugly gaps now in the bosky masses of the Leigh woods as they face the white walls of Clifton. The quarries, which some time since opened on to wooded banks, have lately been worked with such vigour that over large areas all natural growth has been killed, all verdure obliterated, and trees and undergrowth have given place to scarred and riven rocks.

* * * * *

To a large extent this description held good last autumn. But it was then anticipated that the Corporation, notwithstanding its past record of indifference, would be roused to action, and that the Board of Trade would lend its aid to protect the river-bank. For these bodies undoubtedly had it in their power to stop the quarrying, or to impose such reasonable conditions on its continuance as would preserve the cliff face. The quarries would be of no value were it not for the Avon itself, which bears away the stone and supplies the cheapest form of carriage. And the owner of the quarries cannot reach the Avon except across foreshore which belongs to the Crown, and cannot construct a single pier or jetty without the consent of the Board of Trade, the body administering the property of the Crown. The Corporation of Bristol, again, is the port authority, and the Board of Trade would not take any action affecting the approach to Bristol without the concurrence of the Corporation. These bodies, therefore, acting together, are masters of the situation. Not only so, but a course which would inflict no injury on the quarry-owner has been pointed out, and was understood to have found favour with the Corporation. It is a very obvious course—that of carrying the quarrying operations to the rear of the cliff, leaving a wooded screen against the river. It will hardly be believed, but it appears to be the fact, that in these circumstances the Board of Trade has, with the concurrence of the Corporation, agreed to grant to the quarry owner new leases for a long period of the jetties from which the stone is embarked, and this without even an attempt to impose conditions.

* * * * *

But it has some excuse in the extraordinary conduct of the Corporation. That body, which had appointed a committee to consider how the quarrying could be put under control and rendered harmless, and was (it is said) actually in negotiation with the owner, nevertheless, on being consulted by the Board of Trade, saw no objection to the grant of the new leases! The case is even worse than this. The largest quarry is leased to the Corporation, and the stone is used for the repair of the Bristol roads. It is not first-rate road metal. Stone that would last longer could be obtained at a slight additional expense; but not only does the Corporation, in order to obtain a cheap, inferior stone, blast and hack the cliff which it professes to be anxious to preserve, but it has during the last six months quickened the pace at which its ravages are perpetrated; the tonnage of stone taken has largely increased.

* * * * *

Thus at one and the same moment the Corporation spends the ratepayers' money in making a show of solicitude for its beautiful waterway, concurs in action which goes very far to deprive it of all power in the matter, and proceeds as rapidly as possible to do as much harm as it can. Such action is better fitted for the stage of a comic opera than for real life.

* * * * *

The only drawback to this amusing comedy is that the public of Bristol, the public of the West of England, and the public of the whole kingdom will lose irrevocably a rare and very beautiful example of river scenery.

The Birmingham Branch and Warley Woods.—We congratulate our Birmingham and Midland Branch on the very prompt and effective action they have taken to secure the preservation of a valuable beauty-spot as a lung for North-west Birmingham. Professor Hillhouse brought the matter before the Annual Meeting of the Branch at which Sir Hallewell Rogers, the retiring President, was in the chair. It was found that £1,000 is necessary at once to hold the hands of the contractor from the timber on the estate, and most of this has already been subscribed. On no account must the small balance fail to be forthcoming. As to the purchase of the estate itself, the owner is abroad, and, though the sum of £8,000 has been mentioned as the price as a building estate, it is hoped that a smaller amount may be accepted for dedicating the whole or part of the estate to the public. It is in forming a centre for the organisation of such local efforts at an emergency that a branch of the Selborne Society performs one of its most useful functions.

Dunstaffnage Castle.—The Duke of Argyll, as keeper of the oldest Royal Castle in the British Islands, appeals for subscriptions towards its repair, the outer walls threatening collapse, and towards the getting together of a museum within its walls, as has been done at Carisbrooke. Subscriptions may be sent to Messrs. Coutts and Co., 440, Strand, marked "Dunstaffnage Fund."

Alleged Encroachments on Adwalton Moor.—Some of our readers may require to be reminded that Adwalton Moor, near Bradford, where a public road seems to have been stopped, is often in our history books spoken of as Atherton Moor. Here, on June 30, 1643, the Earl of Newcastle defeated the Fairfaxes, temporarily gaining possession of the West Riding for the Royalist cause.

Shooting Rare Birds.—It is most depressing to read the repeated triumphant records of the local gunner as to his prompt destruction of any winged thing he may see that is out of the common. No doubt, as a popular romancist has imagined, an angel, if once "materialised," would immediately share the same fate. Small birds, which it might be hoped would escape notice, share the doom of their larger fellows. We read of a pair of Bearded Tits being shot recently at Burley Fishponds, near Oakham, and of five or six specimens of the magnificent and now rare "Common" Bittern (*Botaurus stellarus*) killed in England during the present year. This last-mentioned fine species, measuring from three to four and a half feet across its wings, once bred regularly in our islands: it still visits them every spring and would certainly re-establish itself if unmolested. It is in the schedule of the Birds Protection Act of 1880, and is protected all the year round by some twenty County Councils, including Cheshire, within the limits of which county one of the

above-mentioned specimens was shot. It is to be hoped that the Cheshire authorities will enforce the law, bearing in mind that, under the recent Act, the specimen shot is forfeited, in addition to the fine incurred. If the existing Acts were fully adopted and enforced, there would be little, if any, need for additional legislation on this matter.

Bird-Protection in Lincoln and in East Sussex.—We have received from the Home Office a Wild Birds Protection Order, dated January 23, for the City of Lincoln. It fixes the close-time at the last day of February to August 16; adds the Buzzards, Swallow, Swift, Martins, Hobby, Kestrel, Merlin and Wryneck to the schedule of the Act of 1880; protects Owls, Wagtails, Woodpeckers, Martins, Swallow, Goldfinch, Kingfisher, Tern, &c., all the year round, and prohibits the taking of the eggs of these species, or of the Cuckoo, Wild Duck, or Woodcock. The Home Secretary also sends us an Order, dated February 15, for East Sussex, fixing close-time as between the last day of February and September 1, adding many species, including Buntings, Hawks, Martins, Osprey, Kentish Plover, Tits, Wagtails and Warblers to the schedule; protecting many species, including the Stone Curlew, Bitterns, Buzzards, Kingfisher, Osprey, Bearded Tit, Dartford Warbler and Woodpeckers all the year round; protecting all birds on Sundays, except in the parishes of Bolney and Twineham, and prohibiting the taking of the eggs of most of the species just enumerated throughout the county, and of any birds on the cliffs between Eastbourne and Brighton.

The Absence of Bird-Protection in Ireland.—"It is really a pity that some steps have not been taken ere this to preserve wild birds in Ireland. In this country there are very stringent laws dealing with the matter, but so far in Ireland little or nothing has been done to prevent the ruthless slaughter of wild feathered creatures. At a meeting of the Irish Society for the Protection of Wild Birds attention was drawn to this, and it was suggested that the County Councils had full power conferred on them by various Acts of Parliament to deal with the matter. As it is, Ireland is the happy hunting ground for collectors of rare species which the law in England prevents them from procuring."—*To-Day*.

Bird Destruction on the Riviera.—"Another matter which might well be dealt with on the Riviera is the wanton destruction of birds. Visitors are constantly noting with surprise the absence of singing birds in woods and gardens there, and can see its cause any day in the number of boys who wander along the country lanes with guns, and think half-a-dozen tom-tits a splendid "bag." A measure similar to the Wild Birds Protection Act ought to be enforced in the district. The silence adds greatly to the mournful appearance of the present frost-devas-

tated gardens. Just now, however, it looks as if half the woods and gardens in the district were to be covered with new hotels." —*Daily Mail.*

Protection of Wild Animals in the Straits Settlements. —As the Courts have decided that the whale is a fish, it is, we presume, hopeless to object to the want of logic in the title of "The Wild Animals and Birds Protection Ordinance, 1904," with reference to the Straits Settlements, which we have just received from the Colonial Office. It empowers the Governor in Council "to establish a close-time for any wild animal or bird," to prohibit netting or snaring generally, or in any specified area, or to empower the Chief Police Officer of any Settlement to issue shooting licences for three months. Killing, taking, or having in possession the body of any animal or the eggs of any bird during close-time is punishable by a fine not exceeding fifty dollars; but wild birds actually found damaging crops by the occupier or custodian of cultivated lands are expressly excluded from protection. The Schedule includes thirty-four species of birds enumerated under their Malay names, and in nineteen cases under such English names as Snipe, Teal, Plover, Sandpiper, Pheasant, Curlew. Would it not be possible—merely in the interests of that exactitude dear alike to lawyers and to men of science—to add the scientific names, especially where no colloquial English equivalent for the Malay appears to exist?

The School Nature-Study Union.—This Union has recently issued a useful pamphlet—reprinted from *The Museums Journal* for January—showing the facilities for Nature-Study offered by eight Museums and seven Gardens in and near London. Teachers will, however, do well to bear in mind that in many cases, notably in that of Kew Gardens, it will be well to make previous application, or official red-tape entanglements may be encountered. Might not the Epping Forest Museum, Queen Elizabeth's Lodge, have been included? The Union also issues a list of books dealing with Nature-Study.

Nature-Study at an Industrial Exhibition.—Two years ago the Society gave a prize in connection with a Nature-Study Section at the Hammersmith Industrial Exhibition. The Society which organised the undertaking still continues to invite Nature-Study exhibits, and Mr. Wilfred Mark Webb, Honorary Secretary of the Selborne Society, in response to an invitation, gave an address on January 23, 1905, on "Nature-Study and the Pursuit of Natural History," at the Hammersmith Town Hall. The objects of the remarks, which were illustrated by lantern slides, was primarily to afford ideas as to suitable Nature-Study exhibits to be shown at the Spring Exhibition. Mr. Webb, however, had something to say by way of general introduction, which was as follows: "The title chosen for my lecture is two-fold, for Nature-Study is a different thing from the pursuit of

natural history. Both agree in often being the means of much pleasant work in the open air, but while natural history is generally a scientific hobby and deals only with living things, Nature-Study is used in an educational sense, and means the observation of all our natural surroundings. In fact, it is by the gratification of natural curiosity that the mind is trained, while knowledge acquired for its own sake is infinitely more valuable than a mass of second-hand information such as is usually poured into scholars' unwilling ears. Science teaching will no doubt be given in the near future to all children, but it should come at a later stage; and though most excellent instruction of the kind is now afforded, it is not Nature-Study. In Nature-Study things are considered in their right seasons, but otherwise informally. If observations are to be made records must be kept, and these are what can be exhibited—illustrated note-books, diaries, calendars, photographs, and collections, but by the latter is not meant accumulations of curiosities, but special sets of properly labelled specimens, each illustrating some special point."

Honour for a Selbornian.—We note with pleasure the election of Mr. W. H. Maw to the high office of President of the Royal Astronomical Society for the ensuing year. Mr. Maw, we are glad to say, has been for some years a supporter of the Selborne Society, and those members who enjoyed his hospitality at his country house at Nutfield last July will not easily forget the occasion.

LETTER TO THE EDITOR.

Legendary Explanations of Natural Markings.

SIR,—I did not have the pleasure of hearing Mr. Nash's paper on this subject, briefly reported in your February issue; but I wish to remark on two points in that report. First, Robert Turner can hardly be termed "a mediæval herbalist," seeing that his *Botanologia* was first published in 1664. In the *Biographical Index of British and Irish Botanists* his "floruit" is given as 1654-87. Secondly, I would point out that the late Dr. Prior explains the name "Blessed Thistle" as referring to *Carduus benedictus*, because it was considered an antidote to poison. It is another species, *Silybum marianum*, the Milk Thistle, to which legends attach on account of markings.

Yours faithfully,

Botanist.

A SPRING EPISODE.

"NEXT month I shall have something to show you," said the ewe: "wander this way again in three weeks' time."

"Just what I was saying," sang the thrush, "come again soon. For the present we have all so much to think of: even the prim speckled hen is sitting. I hear she is full of hope and very patient."

The man and woman listened to the thrush's song: they understood its outpourings.

"I shall be covered with blossom by then," whispered the cherry-tree. "I doubt if you have ever seen such a sight. Every bough and twig on me is ruffled in pure white to the edge of the blue sky; or so it appears to you down below in the orchard."

"We shall surely come," answered the man, laying his hand on the trunk of the cherry tree and looking at the woman: "we, too, shall have something to show you then."

The woman stood beside the ewe, and stroked the broad woolly back thoughtfully. "Give my love to the speckled hen," she said, "I shall think of you all: how beautiful the Spring is."

"Ah! wait till you see my lamb," answered the ewe.

"And my eggs," sang the thrush.

"And my blossom," said the cherry-tree.

The man whispered something to the woman which the ewe and the cherry-tree and the thrush could not hear. She smiled, and drew a deep breath, and again said, "How beautiful the Spring is!"

So the days passed—warm, sunny days. The daffodils shook out their frills, and dotted the orchard with yellow clumps: buds of all kinds unfolded daily, and the Spring hours were hours of sunshine and singing and life. One night a storm arose. The wind raged, and the rain and the hail beat over the fair Spring country. Next morning everyone said, "What a storm! It will have done much damage."

The three weeks slipped away, and on a warm, still afternoon the man went back to the orchard alone. The cherry-tree sighed when she saw him coming, for the hail had cut the white blossom to pieces and swept it to the ground, leaving her bare and desolate. On the grass at her feet a lamb was tethered, and a farm-man was busy feeding it clumsily yet skilfully out of a bottle.

"This is our only little mishap, so far," he remarked to the lonely man. "The master 'ave 'ad an uncommon good season."

The lonely man fondled the lamb as soon as the farm-man left it, but when it looked into his face and bleated, he turned hurriedly away, and stood for a few minutes watching some very

small yellow ducklings, swimming and bobbing in a safe little pond below in the sunny hollow.

As he turned to leave the orchard, where three short weeks ago God's face and another face had smiled upon him, the farmer's two little sons passed the lonely man, each carrying, in careful, dirty fingers, a string of eggs.

"Teddy, you've got *far* too many thrush's eggs on your string," he heard one small boy say to the other, in a complaining voice. "You needn't have bothered about that last thrush's nest."

"So the thrush is also suffering," thought the lonely man, with a fresh pain at his heart as he turned his face homewards. "Out of our small world Spring has kept faith, then, only with the speckled hen."

You see, he never understood about the ducklings.

RACHEL.

NOTES ON LONDON BIRDS IN 1904.

THE following notes continue my record of observations in Hyde Park and Kensington Gardens, which have for some years past appeared in NATURE NOTES.

On the morning of New Year's Day, one of the staff of the Royal Humane Society in Hyde Park informed me that a goose was sitting on a nest containing six or seven eggs on the island in the Serpentine. It was very cold, the thermometer at the Receiving House had been down at 23° F. during the night.

The black swans now nest so regularly that it is scarcely worth while to continue recording the number of their broods. In July last I saw a pair with two young in St. James's Park. On the Serpentine three broods were produced, in April, July and October. Nearly all the young birds appear to come to grief, dogs being perhaps the most frequent cause. When the cygnets are in down the old birds look after them with great care; but as soon as the parents consider them old enough to look after themselves, they suddenly leave their young and start preparing a new nest, and it is then that the cygnets suffer.

On January 25 there was a grey wagtail by the Serpentine: this bird seems now to be a more frequent visitor than formerly. I saw a second near the same spot on October 5, and another on November 12. Two or three missel-thrushes were in splendid song in Hyde Park and Kensington Gardens from early in February until the middle of April. By February 25 several of the black-headed gulls which frequent the Serpentine had acquired their dark Spring hoods. On March 4 I noticed a hen blackbird near the Bayswater Road with a nearly white head.

As far as Spring migrants were concerned, 1904 was a terribly disappointing year. For the first time for many season-

I have no record of the occurrence of the wheatear on its passage through town; nor did I see a single redstart in Kensington Gardens, though this, too, is a most regular Spring visitor. What the reason could be is difficult to say. The first migrant to come under my notice in London was a willow wren, which was singing in Kensington Gardens on April 14. I heard two more on May 4. On May 5 a lovely male blackcap was singing in a hawthorn in Kensington Gardens, and on May 7 I saw three swallows flying over the Serpentine. On May 11 I heard two reed warblers, one by the Long Water and one by the island, in Hyde Park; and on May 18 the spotted flycatcher had arrived in Kensington Gardens. I did not, however, observe any swifts before May 28, when two were flying over Hyde Park.

Ducks were very late in hatching, and on August 10 I noticed a brood of four ducklings on the Serpentine, which could not have been alive for more than two or three days. Not only were most of the broods late, but they were also small in numbers.

Early on the morning of August 20 I flushed a common sandpiper at the usual spot in Hyde Park, just to the east of the bridge over the Serpentine. Though seen occasionally in Spring, the Autumn visits of this species to London are in my experience very rare. The only previous occasion upon which I had come across it in autumn was on August 23, three years previously.

By November 12 the thrushes had begun to sing, and on November 21 a wood pigeon was cooing. About this time we were visited by a severe frost. On November 24 snow was lying, and I observed a linnet feeding on the ground near Hyde Park Corner. As I returned home from my walk upon that evening, a large number of waders were flying high over the Serpentine: they were apparently considering whether to alight. It was quite dark, and the birds were of course invisible; but, as far as I could judge, several species were present, redshank being the most prominent.

51, *Gloucester Terrace,*
Hyde Park, W.
A. Holte Macpherson.

REVIEWS AND EXCHANGES.

The Country Day by Day. By E. K. Robinson. Illustrated with Photographs. Heinemann. Price 6s.

Large journalistic fortunes have been made by the recognition of the large half-educated public, who can only sustain their interest through a short paragraph. In this volume Mr. Robinson, a sympathetic observer of Nature dwelling in the heart of the country, gives us a daily paragraph as to what he has seen during 1904. Each has its headline, and a table of contents enumerating these for each month is all there is by way of index. More, however, is hardly wanted; for, sooth to say, it is somewhat thin gossip with but a very small modicum of information: the pages might well be referred to, like the mottoes in a birthday-

book, day by day ; but are hardly calculated for continuous perusal or re-perusal. Many of the four-and-twenty photographs are admirable, especially "The Thrush's Breakfast-table," "Ripe Blackberries," and the "Beautiful Blue of the Chicory-blossom." This last reminded us how Sir James Edward Smith, writing of the same district as Mr. Robinson, says, "From the earliest period of my recollection, when I can just remember tugging ineffectually with all my infant strength at the tough stalks of the wild succory, on the chalky hills about Norwich, I have found the study of Nature an increasing source of unalloyed pleasure."

Cockerham Moss : being a Short Account of a Lancashire Gullery. By J. R. Charnley. Lancaster : J. M. Wigley. Price 6d. net.

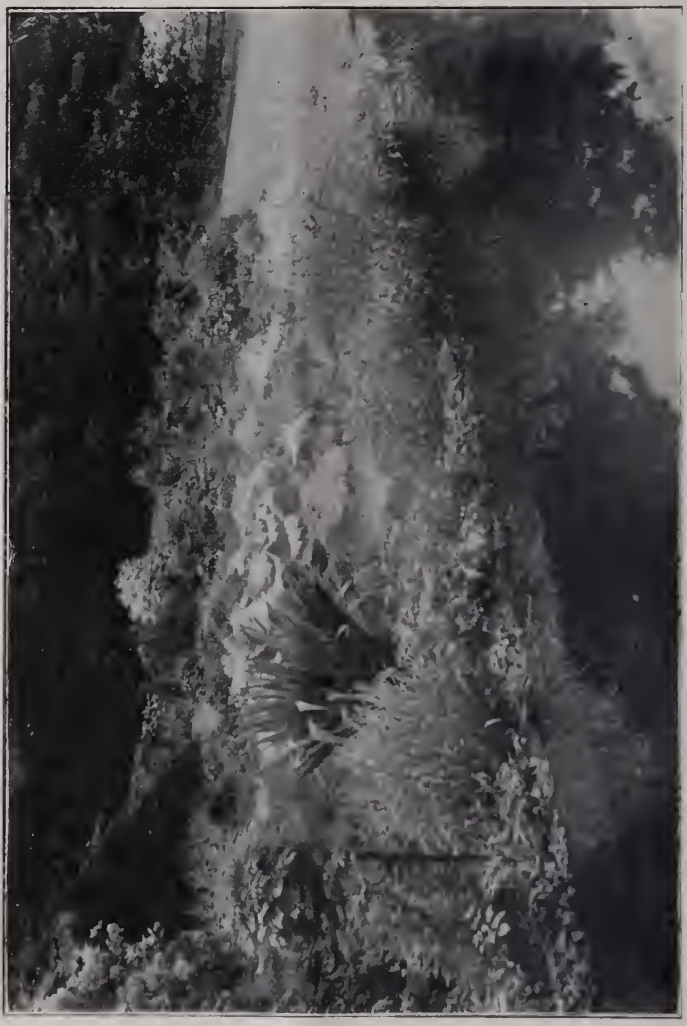
This interesting pamphlet, dealing with a home of the Black-headed Gull (*Larus ridibundus*), and illustrated by four photographs by Mr. W. H. Heathcote of that species and of the Short-eared Owl, which associates with it, is mainly a reprint from *Nature-Study*.

The Girls' Realm for February contains, *inter alia*, an interview with our Vice-President, Mrs. Brightwen, by our Honorary Secretary. Mr. Webb deals

A Wild Bank in "The Grove" Garden.
(By kind permission, from *The Girls' Realm*.)

somewhat fully with the methods adopted by the authoress of "Wild Nature Won by Kindness" to tame the wild birds and other animals at her charming home at Stanmore ; and his account is fully illustrated. By the courtesy of the editor of

the magazine we are able to reproduce here two photographs of beautiful corners in Mrs. Brightwen's garden, which, thanks to that lady's hospitality, will be familiar to many of our readers.



A Corner of "The Grove" Garden. (By kind permission, from *The Girls' Realm.*)

An Outline of the History of Eolithic Flint Implements. By Benjamin Harrison, Ightham, Kent. Of the Author, price 6d. net, post free.

No one is better entitled to deal with the subject of "eoliths" than Mr. Harrison, and every one interested in the earliest known remains of human workmanship should obtain a copy of this modest little paper, which is illustrated with drawings of the implements and sections across the area in which Mr. Harrison

has found them. As we have often said, the sceptical should examine eoliths, not by themselves, but side by side with a series from neolithic through palæolithic types.

Birds I have Known. By Arthur H. Beavan. Fisher Unwin. Price 5s.

We do not know whether Bluebeard ever published a volume on "Women I have known"; but certainly Mr. Beavan's title might almost as well have been "Birds I have Shot"; for he appears to have shot most of his avian acquaintances. He has visited many lands, Australia and South America among the number, but deals also with the birds of his Margate schooldays, of Cornwall, and of London. As a frontispiece, we are given an over-reduced copy of Wolff's "Golden Eagles" in the Duke of Westminster's collection; but most of the other illustrations have a strangely archaic character, nor can we admire the cover which the publisher has provided for the volume.

The Parents' Review for February contains an interesting article by Miss Laurie on "The Habitat of Plants." It is, however, disfigured by too many misprints in the scientific names. We hope readers will not go away with the notion that Halophytes are necessarily "sand-plants," the literal translation "salt-plants" would be preferable; nor can we agree with the writer that July is the best month to see the Bog Asphodel; for surely that very rare colour presented by the fruits in August is better worth seeing than the golden stars which many another species can surpass.

The Totnesian for January, beginning a new volume, with 66 pages of matter, a photographic frontispiece and diagrams showing how to kick a football or maintain an aquarium, is an excellent number, whilst it contains one short story which alone is well worth a whole years subscription, viz., 1s. 6d.

Notes and Comments for December and January contains several interesting notes dealing with the Great Auk, the Lace Wing, British Wild Beasts and the Height at which Birds Fly respectively.

The Estate Magazine for February, in the course of an interesting article on "Habit and Shapes of Forest Trees, calls attention to the descriptions of the forest oak by Evelyn and Gilbert White as being far more accurate as descriptions of forest trees as distinguished from park-grown specimens than those of Dr. Schlich or Professor Marshall Ward.

Received: Bulletin of The New York Botanical Garden, vol. iii., No. 9; *The Plant World* for December; *The Victorian Naturalist* for January; *Our Animal Friends* and *Bird-Lore* for January and February; and *The Irish Naturalist*, *Nature-Study* (Lockwood), *The Animals' Friend*, *The Animal World*, *The Humanitarian*, *The Agricultural Economist*, and *The Commonwealth* for February.

NATURAL HISTORY NOTES.

215. **Squirrel and Cat: the Poetry in Names.**—Archbishop Trench long ago taught us to look for fossil poetry buried in words, as are ammonities or ichthyosaurs in the rocks; and the short account in our last number of a squirrel and some kittens is a further excuse for reproducing here the following paragraph from the *Daily Chronicle*.

"The slaughter of 3,988 squirrels by the Ross-shire Squirrel Club during the past year is part of a war that has long been waged in various parts of Scotland. At one time the squirrel bade fair to become extinct in that country, but the afforestation of the latter part of the eighteenth century saved it, and helped it to develop to the proportions of a plague. For the squirrel has a passion for the young shoots of trees, and its nibbling is apt to stunt the tree's growth, fir buds and bark suffering particularly. And so hearts are hardened against the squirrel, in spite of its pretty ways and name—which, literally, means 'little shady tail,"

being a diminutive of the Latin 'sciurus,' which is simply Greek Latinised. The Greeks called the squirrel 'shady tail' just as they called the cat 'wavy tail'—ailouros."

G. S. BOULGER.

216. Rooks and Potatoes.—All birds of the crow tribe, rooks especially, exhibit a tendency towards winter—like squirrels and some other animals—to lay up a store of provisions for their sustenance against a season of scarcity. While jackdaws select holes of trees, and old buildings to store away such provisions, rooks convey them away to their rookeries. There in last season's nests they deposit them. Should the weather set in with unusual severity when the rooks are unable to obtain their natural insect food from the hard, frozen ground, they visit their emergency larder, and partly subsist upon the stored up provisions. Should, however, the winter be mild, they leave their stores untouched. Towards spring-time, when they begin thinking about setting their houses in order, they visit their rookeries, and when rebuilding their nests, throw out the unused store. Thus it is we often find an accumulation of acorns, potatoes and what not, on the ground under their nests.

41, *Heath Street, Hampstead.* JAMES E. WHITING.

217. Owls.—There are more owls here than in any spot with which I am acquainted. Landlords, tenants, farmers and even gamekeepers leave them alone, and the village lad dare not trespass in search of eggs where every piece of land is preserved. I see or hear barn and brown owls almost every evening. The long-eared owl occurs here, a remark which also holds good in the case of the migratory short-eared owl. Besides these four kinds there are two or three pairs of little owls in a fir plantation close to Narford Hall, where all owls are safe.

Southacre, Swaffham,
February, 1905. EDMUND THOS. DAUBENY.

218. Grouse in East Anglia.—A cock red grouse has recently been shot near Redgrave, on the borders of Norfolk and Suffolk, and had probably strayed from Elveden, where some of these birds have of late years been introduced. A friend writes to say a pack of them was seen between Mildenhall and Elveden last summer. Years ago some were turned down at Riddlesworth by a former owner of the estate. This proved a failure, for the heather there is very poor and stunted. The Eastern Counties are not favourable to red grouse, the heather never making long green shoots, as in Scotland, and a plentiful supply of this food is with them a prime necessity.

EDMUND THOS. DAUBENY.

219. Death-watch.—With reference to the death-watch question, will you allow me to say that the noise that I heard repeatedly years ago was exactly like the sharp, loud ticking of a watch, and it was rather rapid while it lasted. It was similar to the noise produced by the fire-brick at the back of the stove when it is cooling, and the sounds were regular and distinct in their beats. The house was then new and the furniture all new. I generally heard it when in bed, in the deep stillness of the night, and without a fire.

The noise made by weevils is slower, and is like a biting or nipping sound. They do not make the noise by knocking their heads against a post. They have got more sense than that. The sound is made by the biting of their very forcible mandibles at the end of their long proboscis. They will bite into the hardest vegetable substance. The ordinary grain weevil bites into the hardest and most flinty grain. I do not think that it is a native of this country. When granaries are infested by them I believe the weevils were originally imported in cargoes of foreign grain, especially of hard Indian wheat. When they once get into granaries, they will breed generation after generation in a most rapid manner as long as they have any of their food to live on, and it is most difficult to get rid of them, for they hide themselves and hibernate in the cold weather.

Hampstead,
February 15, 1905. PETER HASTIE.

220. Honeydew.—If "honeydew" is the product of aphides, how is it that it is never seen except after a day or two of an extraordinarily hot sunshine?

It is only found on the upper side of the leaves of trees, being the side exposed to the rays of the sun. It is found on only a few kinds of trees, and most especially on the maple, which contains a large quantity of sugar. Last summer there was an extraordinary attack of "honeydew," the pavement in the road I live in being stained quite black under the great maple trees. It was stained to a lesser extent under the lime trees. Its attack never comes more than once in a summer, and never in a summer when there is no excessive heat.

PETER HASTIE.

221. Earwigs and the Death's Head Hawkmoth.—Mr. Whiting's reference (NATURE NOTES for February, p. 33) to the latter insect being made by the Devil (like the wolf in Esthonian legends) reminds me of a saying of my eldest grandson, then about 4 or 5 years old. One day I received some separate copies of papers on earwigs, by post, containing figures of the insects, and the little boy turned them over, and apparently did not much like them, for presently he said, "Mr. God doesn't make earwigs."

Chiswick, W. F. KIRBY.
February 4, 1905.

NATURAL HISTORY QUERIES.

44. Joint Nesting.—When I was in Scotland (Stirlingshire) last May, I noticed a hen blackbird sitting on her eggs, and in the same nest (by her side) a hedge-sparrow. After looking some time to make quite certain, I put them off the nest, and found that all four eggs were those of a blackbird. On taking some friends to see this curiosity next day, I was asked if there were any other similar cases in the neighbourhood, and, on looking in the same garden hedge, we discovered another hedge-sparrow sitting on a clutch of well-grown "mavises," or song-thrushes. Can you explain this, or give any similar cases? I have never heard of it before.

The School House, Highgate, N. D. C. G. BALLINGALE.

45. Fowl Language.—Referring to the article on "Fowl Language" in your current issue, I am often interested to hear the cocks in this neighbourhood giving their challenging crow to one another. The interest is in the fact that the "challenge" or exchange of courtesies occurs invariably every night between 11.0 and 12.0, and is always started by one particular bird at a farm near by. The challenge is taken up first by immediate "residents," and gradually by distant birds whose crow can only just be heard in the distance.

The answering from one to the other goes on perhaps seven or eight times, and one cock after another gradually withdraws from the concert as he entered it.

I have not any doubt this is quite a common fact, but I am interested to know what, if any, known reason is assigned to this midnight procedure.

Eastcote, HERBERT J. RODGERS.
February 7, 1905.

46. Crocuses and Bees.—Will any reader of NATURE NOTES tell me how to protect crocuses from bees. I have a row of blue and white crocuses which are in flower during March. But the bees always spoil them before they are out more than a few days. Can I syringe them with anything that will not harm the crocuses, but, at the same time, will keep off the bees. I do not keep bees, but a villager some way off has some hives. I conclude it is these bees that trouble my crocuses. I may add my St. John's Wort, suffers in the same way later on in the year. The yellow crocuses now in flower are not troubled by them.

West Monkton, Taunton. J. K. BRINKLEY.

47. Frost.—During the dark, foggy and frosty weather which we had before Christmas, when everything was covered with rime, we noticed that the telegraph wires which run along the railway line near us, which were covered thickly with rime, trembled violently ; sometimes one or two were quite still, while all the rest moved, but generally all were in motion together.

An old man who has worked on the line for many years told my husband that he had never seen it before. Can anyone explain the reason of this?

M. S. YOUNG.

SELBORNE SOCIETY NOTICES.

[NOTE.—ALL ANNOUNCEMENTS WITH REGARD TO MEETINGS OF THE CENTRAL SOCIETY OR BRANCHES WILL BE FOUND TOGETHER AT THE END OF THESE NOTICES.]

New Members.—*Central Society*—Mrs. Bethell Earle, Peppard ; A. A. Goodall, West Dulwich : Mrs. Lacy, Guildford; Mrs. Neil, Belgravia; Miss L. R. Thornley, Liverpool.

Birmingham Branch — Miss L. Elliott, Edgbaston ; Miss Hargreave, Bearwood.

Clapton Branch—A. B. Hornblower, Esq., Leytonstone.

Ealing Branch—Miss Jane Grout, Miss Jessy Grout, Richmond.

Hampstead Branch—C. G. Ballingall, Esq., Hampstead; Miss M. D. Bishop, Willesden Green; Macdonald Brown, Esq., M.D., F.R.S.E. ; J. B. Carrington, Esq., Hampstead; Mrs. Shaw Crompton, Haverstock Hill; H. Bellamy Gardner, Esq., M.R.C.S., L.R.C.P., Mrs. H. Bellamy Gardner, Portland Place ; L. G. Glover, Esq., M.D., Hampstead; Mrs. C. M. Havens, Kent; Dr. Hugh Roger Smith, Fitzjohn's Avenue ; Henry Wilkins, Esq., Mrs. Henry Wilkins, East Heath.

Subscriptions.—The Council has great pleasure in acknowledging subscriptions of greater value than 5s. from the following members: Lady Farrer, £2; F. W. Ashley, Esq., £1 1s.; Rev. A. L. Hussey, £1 1s.; Mrs. Lowther, £1 1s.; H. Harpur Crewe, Esq., 12s 6d.; Mrs. Broomhead-Colton-Fox, 10s. 6d.; Miss Broomhead-Colton-Fox, 10s. 6d.; Mrs. Eden, 10s. 6d.; Mrs. Picton, 10s. 6d.; Miss E. Brand, 10s.; Miss J. Brand, 10s.; C. Burt, Esq., 10s.; Thomas Layton, Esq., 10s.; Mrs. Litchfield, 10s.; Rev. F. M. Millard, 10s.; J. Rawlings, Esq., 10s.; Mrs. E. Stevenson, 10s.; T. D. Timbrell, Esq., 10s.; E. D. Vaisey, Esq., 10s.; Miss Ranker, 7s. 6d. ; W. E. Milne-Redhead, Esq., 7s. 6d.; Clifton H. Regnart, Esq., 7s. 6d.; Mrs. Congreve, 7s.

Library.—The Honorary Librarian will attend at 20, Hanover Square, from 6 p.m. to 6.30 p.m., on the evenings when the Publications Committee meets (at present on the second Monday in the month), for the purpose of issuing books to members.

The Honorary Librarian has pleasure in acknowledging the receipt of "A Gardener's Year," by H. Rider Haggard, given by the Editor.

Farnham Branch.—At the Council Meeting held on January 24th, a special vote of thanks was passed to Miss Marindin, who had resigned the Honorary Secretaryship of the Farnham Branch owing to the fact that she was going to live abroad after her marriage. Mrs. Marindin, of "Frensham," Farnham, has become Honorary Secretary of the Branch in her stead.

New Junior Branch.—At the same meeting the warrant constituting the Seaford Junior Branch was approved. The Honorary Secretary is Miss Winifred Poole, of "Queen's Park House," Seaford, Sussex.

SELBORNE SATURDAY AFTERNOONS.

January 28.—Though the unfortunate indisposition of Mr. Murray prevented the Selbornians from meeting him, Dr. Rendle, F.L.S., kindly came forward in his place, and delivered a most interesting address in the Botanical Department of the British Museum. The origin and progress of this Department occupied the first part of his address, while the latter part of the time was devoted to the examination of early botanical collections and herbals, as well as plates and illustrations of plants and flowers from many lands. Although Sir Hans Sloane left his collections to the nation, at a price far below their value, they remained in the Library of the British Museum for some years as part of the Library. The Department of Botany had its real origin in the collection of Sir Joseph Banks, who bequeathed it at his death in 1820. His Herbarium contained many specimens of his own collecting, as well as many more purchased from other collectors. These were all in the care of Robert Brown, who, in 1827, was appointed the first Keeper of the Botanical Department, a post which he occupied until his death in 1858. The Sloane Collection was then removed from the Library to its proper home in the Botanical Department. It numbered about 333 volumes, which, even now, remain distinct from the general Herbarium. The original mahogany cases, with, of course, many later additions to contain further accumulated treasures, still line the walls. Some of the first dried specimens of plants were shown, Dr. Rendle taking a mint (*Mentha aquatica*) and showing the original specimen, as well as Linnæus's own description of it (in the *Hortus Cliffortianus*), as he saw it growing in Clifford's garden. The preparation, docketing and arrangement of the botanical specimens received at the Museum was then shown. Attention was afterwards directed to the cases of fruits. The natural order *Leguminosæ* was chosen and specimens of pods were inspected, ranging from some as long as two feet to others the size of the ordinary garden bean and smaller. Some of Sir Hans Sloane's original specimens in wooden boxes with glass tops and bottoms, labelled in his own handwriting, excited much interest. That part of the Library exhibited included several immense volumes of Sir Hans Sloane's original specimens, beginning with the seaweeds and other plants, mostly the results of his visit to Jamaica. Some beautiful drawings by Ferdinand Bauer, the Ortus Sanitatis, Füchs's and Gerard's Herbals, and some early editions of Linnæus's works were also on view. Ehret's drawings of the Linnæan system, with notes by the great botanist himself, were also shown. Mr. Walker, on behalf of the party, which numbered about 35 Members, expressed the warmest thanks to Dr. Rendle for the great pleasure which he had afforded the Selbornians by his lucid and clear remarks on the very interesting subject he had chosen.

February 11.—By kind permission of the Master and Wardens of the Company, between 60 and 70 Selbornians visited the ancient home of the Vintners on this Saturday afternoon. A paper read to the visitors by Mr. George Avenall disclosed some interesting items of information with regard to the Guild's history.

According to the ever useful Stow, the Ward of Vintry was the place where the Bordeaux merchants unloaded their wines and "made sale of them within forty days after"; but it is probable that the locality was identified with the trade from very early times, seeing that the vine and the trade of the vintner were introduced by the Romans into Britain. And it is worthy of note that at the time of the Norman Conquest vineyards were cultivated in several English counties, which seem to show that our climate was more benign 800 years ago than it is now.

If the records are obscure in some places they are precise in others. In 1256 the vintners defied the King's Justiciar, Henry de Ba, because he wanted to "amerce" them; and again, on Sunday, September 14, 1276, there was a "diligent inquisition" into the death of one Adam Schot, who had been killed by falling to the ground when trying to climb some one else's pear tree. Here are two instances of precision, while, on the other hand, much that we should like to know is either unwritten or has been lost.

The vintners were sometimes in trouble themselves, and sometimes got others into trouble. Early in the fourteenth century they were fined for refusing to let their customers see the wine drawn from the cask. Further, in 1609,

stocks were erected in the Company's hall, where offending members sat "in sight of the whole assembly." A vintner, named John Penrose, convicted of selling unsound wines, in addition to being imprisoned, had to drink some of his own bad liquor, while the rest was poured over him. On the other side, under their supervisory powers, the vintners had power to sample wines, and on these being found defective and not good enough for sauce or vinegar they were poured into the "canell in Cheapside."

It must have been hard work for the City Companies to satisfy the rapacity of monarchs. At one time the king appeared able to take pretty much what wine he wanted, and at another time the Guild's plate had to be realised to meet the royal demands. Monarchs "borrowed" and the city "lent" in a sense that now would be quite unacceptable. Charles I. levied £60,000, and of this the vintners had to find £3,120, besides contributing another £6,000 not long afterwards in return for some trade privileges.

It is remarkable how history repeats itself, for in Elizabeth's reign the Court of Aldermen considered what steps should be taken to diminish the great number of taverns, and though more than three centuries have gone by, the problem still confronts us.

Along with the dyers and the Crown the vintners have long enjoyed the right of keeping swans on the Thames. Towards the end of July takes place what is known as "swan upping." The royal swankeeper and representatives of the two Companies proceed up the river and mark the cygnets with nicks on the bill. Of late years the vintners have introduced black swans, which are said to be doing well.

Erected just after the great fire, Vintners' Hall is spacious, comfortable and well proportioned. Tradition ascribes its design to Wren, as it does the handsome carving in the hall and court-room to Gibbons, but unfortunately there is no documentary evidence to support the tradition. The Company has a superb collection of charters, which are well displayed on the walls. Notable, too, are a piece of tapestry dating from 1466, and the vintners' funeral pall, the latter, according to Mr. Philip Norman, F.S.A., being a very fine specimen.

After the inspection of the premises and muniments, the Selbornians were hospitably entertained to tea in the court-room. Mr. R. Marshman Wattson and Mr. H. Plowman, F.S.A., took part in the complimentary proceedings which followed.

NEWS FROM THE BRANCHES.

Birmingham and Midland.—The Annual Meeting was held on Tuesday, January 31, in the Council House, Birmingham, Sir Hallewell Rogers, President of the Branch, in the chair. There was a large attendance. The Honorary Secretary read the Committee's Report, in which it was stated that during the past year the objects of the Society had been furthered by means of lectures, the distribution of notices on the Preservation of Birds and Plants, and in various other ways. The financial statement was very satisfactory, there being a balance of £19, which will enable the Committee to arrange for the giving of more lectures, which they consider is one of the most effective methods of extending the objects of the Society.

At the close of the business proceedings Professor Hillhouse proposed a resolution "for the Preservation of the Warley Woods." This was seconded by Mr. Arthur T. Parkes, an interesting discussion on the subject followed, and ultimately a committee was formed, to endeavour to carry out the scheme.

The Lord Mayor of Birmingham has consented to be President of the Branch during the ensuing year.

Hampstead. *February* 6.—To a good attendance of members, at the Subscription Library, Mr. William Whitaker, B.A., F.R.S. (Vice-President of the Selborne Society), delivered his promised geological lecture, entitled, "The Hammerer and the Camera." Mr. Whitaker at the outset humorously alluded to the now ubiquitous camera. There had been Stone and Iron Ages, while the present might be termed the Photographic Age, so thoroughly did photography seem to pervade everything. The slides he had to show were the result

of an idea, which germinated fifteen or twenty years among the members of the British Association, of keeping a record of geological observations by means of photography. Some of the slides were pretty, some were not, but purely educational, and some were both. Mr. Whitaker threw upon the screen sections of various rocks, some magnified, some not. He discussed the Carboniferous Limestone, and the appearance of coal as seen under the microscope. Then he dealt with limestone generally and other calcareous formations, proving that under high magnification these were found to be made up almost entirely of micro-organisms. Especially lucid were Mr. Whitaker's explanations of rock bedding, and of the pressure to which in course of time different strata had been subjected, causing them to have a vertical, or nearly vertical, instead of a horizontal position. A description of a submerged forest in Cheshire, with the fossilised trees exposed to view at low tide, was followed by the audience with the closest attention. Another set of slides illustrated caverns in limestone districts, particular notice being drawn to stalactites and the stalagmitic floor. Mr. Whitaker referred in some detail to the movements of the earth's crust, exhibiting a rise here and a sinking there, and concluded his extremely able and interesting address by pointing out that geology was not the dry and unattractive science it had sometimes been represented. On the motion of Dr. H. Bellamy Gardner and Mr. F. Morris, a hearty vote of thanks was accorded to the lecturer, while a similar compliment was passed to the Chairman, Mr. M. Yeatman Woolf.

February 18, the local Committee and Delegates again visited, by special invitation, the museum of Mr. M. Yeatman Woolf, at 46, St. John's Wood Park, where they had the pleasure of meeting about twenty members of the Battersea Field Club. After inspecting the many interesting exhibits, which had been distributed over two or three rooms so that they might be viewed to the best advantage, the visitors had the privilege of listening to an address on "Tunicates" by Mr. P. Macleod Yearsley, F.R.C.S., F.Z.S., prepared specially for the occasion. During the afternoon heartiest thanks were passed to Mr. Yearsley for his demonstration and to Mr. and Mrs. Woolf for arranging the meeting as well as for the hospitality which they afterwards dispensed, not, it is but right to acknowledge, for the first time this winter.

The Committee of the Branch has pleasure in acknowledging subscriptions of greater value than 5s. from the following members: Thomas J. Barrett, Esq., £1 1s.; Arthur T. Cummings, Esq., £1 1s.; C. H. Cottam, Esq., 10s.; Peter Hastie, Esq., 10s.; Henry Wilkins, Esq., 10s.; Mrs. Henry Wilkins, 10s.

North Middlesex (Junior).—The new session of this Branch has opened well. The Committee decided to admit ladies, and several have availed themselves of the privilege and have been admitted Associates of the Society.

On January 6, Mr. W. J. Wade (Associate), spoke on "Electricity and Animal Magnetism," and on Friday, January 20, Mr. F. E. Watkin (Associate), gave an excellently written paper on "British Freshwater Fishes." Mr. Watkin dealt with the habits and haunts of the various coarse fish, and also spoke at some length on the natural history of our game fish, the salmon, trout, &c. An interesting discussion followed.

On Friday, February 3, Mr. George Brooks (member of the Selborne Society) gave an instructive and entertaining demonstration on "Popular Entomology." He referred to many popular fallacies that existed in connection with butterflies and moths, and illustrated their differences by means of a well-arranged collection of those insects. Mr. Hall had mounted several slides of scales and other objects which he showed under the microscope, to assist in illustrating the subject.

Rowland Houses Nature-Study Society (Junior).—On Monday, February 6, Mr. Wilfred Mark Webb gave a lecture, illustrated by lantern slides, to the members of the Branch. The subject was "Colour in Nature," and particular attention was paid to the uses of colour and markings to animals, though the lecturer did not fail to point out cases where colour could hardly have any significance, and others in which its explanation has not yet been discovered.

Seaford (Junior).—The inaugural meeting was held at Queen's Park House on February 18, when Mr. Hubert Poole, Honorary Librarian of the Society, addressed the members on "The Objects of the Selborne Society and the Duties of Selbornians." A discussion followed, and a number of Associates were enrolled.

FORTHCOMING EVENTS.

Central Society.

Business Meetings.—The next meeting of the Council will be held on Tuesday, March 28, at 5.30 p.m., and the Publications Committee will meet on Monday March 13, at 5.30 p.m.

Selborne Saturday Afternoons.—*Saturday, March* 11.—The Houses of Parliament. Under the personal guidance of Lord Avebury, President of the Society. Meet Mrs. Percy Myles in the "Central Lobby," at 2.15 for 2.30 p.m. Members only.

Saturday, March 25.—Visit to Tallow-Chandlers' Hall, Dowgate Hill (near Cannon Street Station), E.C. Guides: M. F. Monier-Williams, Esq. (Clerk to the Company), J. Douglass Mathews, Esq., F.R.I.B.A., F.S.A. Also visit to Innholders' Hall, College Street, Dowgate Hill, E.C. Guide: J. Douglass Mathews, Esq., F.R.I.B.A., F.S.A. *N.B.*—Assemble at Tallow-Chandlers' Hall punctually at 2.30 p.m. As space at both Halls is limited, only Members can be admitted.

Branches.

Hampstead.—A lecture on "Our Unseen Foes," will be given by Macdonald Brown, Esq., M.D., F.R.C.S., F.R.S.E., at the Subscription Library, Prince Arthur Road, Hampstead, on Wednesday, March 22, at 8.30 p.m. There will be numerous blackboard illustrations. The chair will be taken by Mr. Macleod Yearsley, F.R.C.S., F.Z.S.

ANSWERS TO CORRESPONDENTS.

S. V. Body.—*Parrotia persica*, one of the *Hamamelideæ* or Wych-Hazel family, a native of Persia, less valuable for its not unattractive appearance at this season of small mercies than for the splendour of its autumn foliage tints. It is sometimes called the Iron tree.

1. All communications for NATURE NOTES must be authenticated with name and address, not necessarily for publication.

2. The return of an unaccepted contribution can only be guaranteed when it is accompanied by a stamped and addressed envelope. We cannot undertake to name specimens privately, to return them, or to reply to questions by letter.

3. All communications for any number must be in the Editor's hands by the 10th of the preceding month.

4. Communications for NATURE NOTES, books for review, specimens for naming, &c., should be addressed to the Editor, PROFESSOR BOULGER, F.L.S., F.G.S., 11, Onslow Road, Richmond, Surrey.

5. For the supply of the Magazine to others than members, or for back numbers (except in the case of new members), address the publishers, with stamps at the rate of 2½d. per number, Messrs. JOHN BALE, SONS AND DANIELSSON, Ltd., 83-91, Great Titchfield Street, London, W.

6. Letters connected with the business of the Society, subscriptions, and applications for membership, should be sent to the local Honorary Secretary, or to the Honorary General Secretary of the Society, WILFRED MARK WEBB, F.L.S., at 20, Hanover Square, London, W.

Nature Notes:

The Selborne Society's Magazine.

No. 184. APRIL, 1905. Vol. XVI.

OBJECTS OF THE SOCIETY.

To promote the study of Natural History. To preserve from needless destruction such wild animals and plants as are harmless, beautiful, or rare. To discourage the wearing and use for ornament of: (1) The skins and furs of such animals as are in danger of being exterminated; (2) the skins and plumage of such birds as are not domesticated. To protect places and objects of natural beauty or antiquarian interest from ill-treatment or destruction. To afford facilities for combined effort in promoting any of the above or kindred objects.

SELBORNIANA.

The Annual Meeting and Soirée.—The Annual Meeting and Soirée of the Society will be held on Wednesday, May 3, 1905, in the Large Theatre and Halls at Burlington Gardens (formerly the buildings of London University), by kind permission of the Civil Service Commissioners. Lord Avebury will preside and will deliver his annual address; and there will also be entertainments and exhibits as usual, of which details will be announced later. All Members will be entitled to receive one NON-TRANSFERABLE ticket, and to purchase others for their friends at a nominal price (one shilling). Members unattached to Branches will receive their tickets by post: Branch Members must apply to their local Honorary Secretary, as must also Associates, who, with Adherents, will be allowed to purchase tickets for themselves and their friends at the price of one shilling. Guests' tickets, which may be had from the Honorary General and Local Secretaries, will have no price printed upon them; but they will under no condition be available unless signed by a Member, Associate or Adherent.

The Birmingham and Midland Branch.—We have received the Annual Report and Statement of Accounts of this Branch for 1904, and they are certainly very satisfactory. Two lectures have been delivered and three excursions made during the year: the membership, which exceeds a hundred, has been increased, though only by three: the management has been most economical and the Treasurer has a substantial balance in hand. Nevertheless so large and so populous a district ought to yield many more supporters for our Society; and no doubt its action with regard to Warley Woods will attract more Birmingham residents to the Branch.

Whitgift's Hospital.—Mr. W. Whitaker, B.A., F.R.S., Vice-President of our Society and President of the Croydon Antiquities Protection Committee, will deliver a lecture on Whitgift's Hospital and its architectural importance, illustrated by a number of lantern-slides, before the City of London College Science Society, at the College, in White Street, Moorfields, on Friday, April 14, at 8 p.m. The Chair will be taken by Professor Boulger, President of the Science Society, Editor of Nature Notes. Visitors are cordially invited.

International Ornithological Congress.—The Fourth International Ornithological Congress is to be held in London, mainly at the Imperial Institute, between the 12th and 21st of June inclusive, under the presidency of our Vice-President, Dr. Bowdler Sharpe. The Congress proper, an excursion to Tring and a reception at the Mansion House, are arranged for the first week, Woburn, Cambridge and Flamborough Head being visited during the last three days above-mentioned. There will be five sections, viz.: systematic, distributional, anatomical and palæontological ornithology; migration; biology, nidification and oology; economic ornithology and bird protection; and aviculture. Member's subscription is £1, Mr. C. E. Fagan, of the Natural History Museum, being Treasurer; and ladies are eligible for membership. We notice the names of our President, of Mr. Pycraft, A.L.S., and of other Selbornians, upon the General Committee. All enquiries should be addressed to the Secretary, J. Lewis Bonhote, M.A., Ditton Hall, Fen Ditton, Cambridgeshire.

Preservation of Big Game.—An interesting article on the Society for the Preservation of the Wild Fauna of the Empire and the necessity for Government action—mainly with reference to Africa—from the pen of Sir H. Seton-Karr, C.M.G., M.P., appeared in *The Standard* of March 2. "Your true big-game hunter," says Sir Henry, "is a naturalist and a lover of wild life, paradoxical as the statement may appear to some people, as well as a man who likes the healthy excitement of the chase. He kills for trophies, and, where necessary, for food, but hates

unnecessary slaughter, and protests against ruthless extermination."

Wild Birds Protection Order.—We have received from the Home Office an Order, dated February 28, applying to the county of Leicester, repeating the Order of January 25, 1900, protecting the Kingfisher and the Goldfinch all the year round, adding the Flycatchers, Swallows, Wagtails, &c., to the Schedule of the Act of 1880, and protecting the eggs of numerous species for the next five years.

Regulating Advertisements.—Lord Balfour of Burleigh, introduced an "Advertisements Regulation Bill" into the House of Lords on February 24, which was read a second time on March 9. It empowers local authorities to make bye-laws to regulate, restrict, or prevent advertising by dazzling light, by scattering papers, by hoardings above a certain height, or in such a way as to injure the amenities of a pleasure resort, or disfigure the natural beauty of a landscape. We need hardly say that we are in full sympathy with this proposal, and hope that it may be successfully carried in its integrity through its further parliamentary stages.

The Towing-path at Richmond.—A strong feeling of disapproval has been aroused in Richmond and the neighbourhood by the proposal by the Office of Works to carry an iron railing along the Thames towing-path for about a mile and a half between Richmond railway-bridge and the south-western corner of Kew Gardens, opposite Iron House. The path is at present separated from the old Deer Park by a small stream, known as the Ha-ha, the bank of which is prettily wooded and which has some wooded islands in it. The iron railing would exclude the public from the outer bank and the effect, it is contended, would be to destroy the present rusticity of the place, without any compensating advantage. At the last meeting of the Richmond Town Council a paragraph of a committee's report, in which the intention of the Department was first made public, and which expressed approval of it, was struck out, and since then much indignation has been expressed that such a thing should be contemplated.—*Times*.

Ruskin Park, Denmark Hill.—It is a singularly happy thought to associate the name of John Ruskin, one of the apostles of the truest Nature-study, with a new and valuable open space for South London in the immediate neighbourhood of the home of his youth and early manhood. It is hoped that twenty-four acres of the beautifully timbered high ground on the slope of Denmark Hill may be secured at £2,000 per acre. The Camberwell Borough Council has voted £10,000 and the Lambeth Council £5,800, while £4,300 has been subscribed privately; but, in addition to further help which may be antici-

pated from the Southwark and London Council, it is estimated that £6,500 must be subscribed by the public. The Commons and Footpaths Preservation Society, the Kyrle Society and the National Trust, with the Bishop of Rochester and the Mayors of all the neighbouring boroughs, are associating themselves with the movement to secure this estate.

LETTERS TO THE EDITOR.

Professor Bell's Copy of White's "Selborne."

Sir,—An interesting copy of Edward Jesse's edition (1851) of Gilbert White's "Selborne" has just come into my possession. Its point of interest lies in the fact that, pasted on the inside of the cover, is the book-plate of Thomas Bell. It bears his name printed in Early English characters beneath what were presumably his armorial bearings, with the Latin legend, *Ne tentes aut perfice*. Professor Bell, I need scarcely say, edited an edition in two volumes, published in 1877.

Yours, &c.,
Edwd. A. Martin.

Legendary Explanations of Natural Markings.

Sir,—May I be allowed to thank your correspondent, "Botanist," for pointing out my *lapsus linguæ* in describing Robert Turner as a "mediæval" herbalist.

With regard to the "Blessed Thistle," I am not a botanist, and can therefore only give my authority for the statement in my paper, *i.e.*, "Suffolk Words and Phrases," by Edw. Moor, F.R.S., F.A.S., &c., p. 456.

I might add that the legend he attaches to "*Benedictus carduus*," which I quoted in my paper, is copied word for word in "County Folk Lore, Printed Extracts, No. 2, Suffolk," collected and edited by the Lady Eveline Camilla Gurdon, and issued by the Folk Lore Society.

281, *Seven Sisters Road*, Yours faithfully,
Finsbury Park, N., March 10th, 1905. Ernest C. Nash.

SEA GULLS AS PETS.

MANY birds, like horses and dogs, have a great faculty of knowing people who are fond of them, and, like the four-footed animals, conceive great fondness and attachment and become, if one may be allowed to use the expression, fast friends. Among the sea birds this feature seems much more strongly developed in the gulls than in others. In autumn and early winter and spring gulls seem often to experience great difficulty in obtaining food. They are then

compelled to come in among the houses in different parts which I know. Especially is this the case where there is a garden plot or a bit of grass. These they frequent, picking up a precarious living by finding worms, or any refuse which may be thrown out. Where poultry is kept they are always on the watch at their feeding time, and many a stand-up fight takes place between the poultry and the gulls over the feeding.

The visits of the gulls at feeding time is often the means of a friendship being begun between an individual and a gull which will last for years, often till the death of the gull brings it to an end. And this is how the friendship begins. With a view of allowing the poultry to get their food undisturbed, the party feeding them carries a few bits of broken bread. This is thrown to the gulls, who devour it eagerly. Repeated from day to day the gulls look upon it as a matter of course and attend regularly at feeding-time. One bolder than the others is of opinion that the distribution of bread is apparently specially intended for him. He asserts his right to it by boldly attacking the others, who ultimately get alarmed and let him exercise his right by conquest. Left to himself he gets, in course of time, quite tame, so tame, in fact, that he will pick up the bits of bread from between your feet when dropped there, and latterly from your hand.

To a casual observer all gulls seem alike, but that is not the case; for to a keen observer there is a difference, which he can detect, but which it is difficult to explain. So keen is it that he can distinguish his pet bird among a number. Many people will be inclined to smile at this, but it is nevertheless true. In fact, some people would tell you plainly they would not credit the fact that the same gull would frequent the same place for years. They would want proofs, and these are not difficult to supply. The writer has been a keen observer of the gulls for years, and counts among his feathered friends two gulls which have never been in captivity, which have an acquaintanceship of almost seven years' standing.

These birds are easily known from the fact that one of them has lost half a leg below the "knee," and the other has one of its feet damaged, which compels it to drag it when walking.

The former, when I was in the habit of feeding it, often fell when running to catch the bread. In consequence, I conceived the idea of teaching her to catch it when thrown in the air. This idea caught on, and the gull became an adept in catching, seldom missing the bread thrown. On some days when the wind is too strong it is difficult to throw up the bread, and on these occasions she feeds off the ground. She knows the writer perfectly by sight, and if she is feeding in the park, which is close to the house, and he knocks on the window, she will fly round to the front of the house to meet him at the door. How she lost the half of the leg is a mystery, but she has got accustomed to it and can manage to get along marvellously on the

whole leg and the stump. I have tried to snapshot her, but in vain: the camera appears suspicious, and she declines to sit long enough. The other bird is well-known locally to numbers of people, and sits on a dyke along which the main street of the town runs. He is locally known by the same name as that of a townsman, and is the recipient of many little offerings at the hands of many, which he takes out of the donor's hand.

For over six years I had another one which came regularly to the house to be fed. On opening the dining-room window which overlooked the lawn, where he often sat, he would, on being called, come and eat bread off the window-sill. He was a perfect terror to the other gulls, which he would fight and chase, his favourite mode of attack being to catch hold of the tail of another and hang on, and though the one attacked would sometimes run the whole length of the lawn, he kept hold like grim death. He was very fond of out-of-the-way dishes, things which must have been quite foreign, bits of currant cake and lobster. One day about Christmas time I presented him with the carcass of a cooked goose. This he appreciated highly and got good pickings off it. While he was engaged discussing it another gull was busy watching. Judge of the writer's surprise when gull No. 1, after being apparently satisfied, allowed No. 2 to have a picking. While No. 2 was enjoying the treat, No. 1 kept going round him, with a view apparently of keeping others off. On No. 2 having whetted his appetite the remains were divided up, each departing with his portion. Gulls, or at least some of them, are great gluttons, and I have seen them gorging themselves to such an extent as to render themselves incapable of flight for any great distance. At times I have seen one of my gull friends, when he saw I was going to feed him, disgorging a lot of fish bones and then turn round and eat bread. During the herring-fishing season they are well supplied with offal, but many of them are not content with this form of food, and raid the herring barrels filled with fish, upon which the lids are only loosely laid at night.

During the whole year the gulls of my acquaintance visit me daily, with the exception of the breeding season, when they pay a flying visit, as if it were for the purpose of letting me know I had not been forgotten by them.

No doubt many people unacquainted with the gull family will be apt to think my sketch extravagant. I cannot blame them, for personally, if I had not studied their habits closely for years, but had been told what I have experienced, I would not have credited it. Watching the gulls is a harmless and entertaining pleasure, and many people would derive much information and pleasure from following my example. Let them try, and they will not be disappointed.

THULE.

REVIEWS AND EXCHANGES.

The Glamour of the Earth. By G. A. B. Dewar. With illustrations by R. W. A. Rouse. George Allen. Price 6s. net.

We have learnt to expect a book daintily got up from Mr. George Allen, and true appreciation of Nature expressed with poetical sympathy from Mr. Dewar. In neither respect does the present work disappoint us. Bound, perhaps, in too delicately coloured a cloth, it is exquisitely printed and light to hold, while in four full-page photogravures, and even more in the headings to the ten chapters, Mr.

(From "The Glamour of the Earth." By kind permission of Mr. George Allen.)

Rouse has fully caught the poetry of the author he is illustrating. Obviously written in the midst of the country life it describes, without any attempt at the directly didactic, Mr. Dewar's book, though eminently readable throughout, hardly lends itself to quotation. We notice that he asks whether anyone has ever been perched upon by an adult wild bird in this country. This we cannot claim, though a Camberwell Beauty butterfly did once condescend to alight on the writer's shoulder. But this was on the bank of the Dvina. Largely, though not exclusively, ornithological, the book contains so many useful observations that it should have been deemed worthy of an index.

Natural History in Zoological Gardens; being some account of vertebrated animals, with special referencee to those usually to be seen in the Zoological Society's Gardens in London and similar institutions. By F. E. Beddard, M.A., F.R.S. With illustrations by Gambier Bolton and Winifred Austen. Archibald Constable & Co. Price 6s. net.

There was certainly room for a short, simple, readable, but accurate account of the animals usually seen in Zoological Gardens, such as Mr. Beddard, the accomplished Prosector of the Zoological Society, gives us in this volume; and when, moreover, it is illustrated by more than thirty of Mr. Gambier Bolton's unequalled photographs and nearly twenty of Miss Austen's clever drawings, the result is a most attractive volume. The author describes 117 species, with shorter references to others, and mainly confines himself to those to be seen in the Regent's Park. His purpose is confined to vertebrates; but in reading his prefatory remarks on the Animal Kingdom as a whole, it occurred to us that mention might have been made of the beautiful little fresh-water Medusa that appeared next door, so to say, in the Royal Botanical Society's tanks; and that, now that even the Westminster Aquarium is no more, the Zoological Society might do more in the direction of salt and fresh-water aquaria. Such instructive types as *Spongilla*, *Echinus*, *Limulus*, *Limnæa* and *Octopus*, ought certainly to be on view; and, perhaps, further concessions to education, such as distributional maps, diagrams, tables of classifications, and even a few fossils, skeletons and casts, might not be amiss. This criticism on the Zoo., however, is quite apart from Mr. Beddard's book. His introductory matter, excellent as it is, is very

HIPPOPOTAMUS.
(From "Natural History in Zoological Gardens.")

KIWI.
(From the same work.)

brief; but we note with interest the introduction of most suggestive references to embryological facts, such as the identity of the external ear hole and Eustachian tube with a gill-cleft, and such physiological characters as the alert look which accompanies the presence of ears in mammals, and the correlation of the absence in this group of striking coloration with the predominance of the senses of smell and hearing over sight. The accounts of the various species, in which the proportion between mammals, birds, reptiles, amphibia and fishes is nicely adjusted, are full of interesting notes on habits, anatomy, adaptations and popular legend,

KEA PARROT.
(From the same work.)

so that we do not doubt that the volume will stimulate many a reader to further enquiry. The table of contents on p. vii. is, as it stands, most misleading, as in the case of five chapters the title of the first paragraph only appears, suggesting that forty pages are devoted to the polar bear, as many to the deerlet or chevrotain, and thirty to the painted snipe, whilst as a matter of fact the account of each species averages a little over two pages. We are indebted to Messrs. Constable for the loan of the three blocks illustrating this notice.

Verses chiefly about Nature. By G. E. M. Elliott Stock.

We can hardly accept the title of this little volume, which comes to us daintily wrapped in gold-lettered imitation vellum. The verses are mainly religious, nor do the few—there are but twenty-five short pieces in all—that deal with "Nature's aspects" reveal any originality of treatment, real knowledge, or exceptional felicity of expression.

Methods in Microscopical Research: Vegetable Histology. By Abraham Flatters, F.R.M.S., Lecturer and Demonstrator in Microscopy, Municipal School of Technology, Manchester. Sherratt and Hughes. Price 21s. net.

This work, by one of our most skilled mounters of microscopic objects, awaits the receipt of two hundred subscribers before publication. It is to be a crown quarto with twenty-three coloured plates, comprising eighty-five hand-painted photo-micrographs. In addition to a full exposition of methods of preparing objects, it will deal in detail with the histology of each of the parts of a flowering plant. Judging from the excellence of the specimen plate we have received—four sections of the stem of *Pinus*—and the technical repute of the author, we should think the requisite subscribers will soon be forthcoming.

Haileybury Natural Science Society and *Felsted School Scientific Society. Reports for* 1904.

Two very good examples of such school reports, though drawn up on somewhat distinct lines. Haileybury is rich in the possession of a small but very comprehensive museum, which is constantly enriched by gifts from Old Haileyburians. Felsted prints its President's address, dealing with the deposition of rock-salt, meteorological and phenological notes, and a letter from an Old Felstedian on his observation of the Mountain Goat in British Columbia.

NIGHTJAR (⅔ Natural Size).
(From "British Bird Life." By permission of Mr. T. Fisher Unwin.)

British Bird Life: being popular sketches of every species of bird now regularly nesting in the British Isles. By W. Percival Westell. With an Introduction by the Right Hon. Sir Herbert Maxwell, Bart. With 60 illustrations from original drawings by Arthur Martin, and photographs taken direct from Nature. T. Fisher Unwin.

In spite of the enormous output of ornithological works of late years, there

was, we think, room for such a work as the present. Strictly limited to truly British species, 177 in number, it describes them and their nests, eggs, notes, migrations and habits in language intelligible to anybody. Many of the photographs and drawings are excellent, and we wish there were more of them. In this day of cheap and good photography and printing in colours, we ought to have a comprehensive British avifauna, such as the present work, with coloured representations of every species, with its nest and eggs. Personally, we would rather that Mr. Westell had described the species in some systematic arrangement rather than in the alphabetical order of their English names; but, at any

TREE PIPIT. ($\frac{1}{3}$ Natural Size).
(From "British Bird Life." By permission of Mr. T. Fisher Unwin.)

rate, his book is in consequence, by no means difficult to consult. The author has established a reputation for first-hand observation, and we think the present work will redound to his credit as a guide to younger students of ornithology. In justice to Mr. Westell we must mention that he describes the position of the Nightjar in one of the blocks, which we are permitted to reproduce here, as exceptional.

The Plant World for January, beginning the eighth volume and issued in somewhat different form, contains an interesting paper by Professor I. B. Balfour, F.R.S., on "Physiological Drought in relation to Gardening."

Received:—*The American Botanist* for December and January; *The Victorian Naturalist* for February; and *The Naturalist*, *Nature Study*, *Our Animal Friends*, *The Animals' Friend*, *The Animal World*, *The Humanitarian*, *The Estate Magazine*, *The Agricultural Economist*, and *The Commonwealth* for March.

NATURAL HISTORY NOTES.

222. Golden Eagle Shot.—No doubt many readers of NATURE NOTES will be glad to hear that a very fine golden eagle paid a visit to Grovelly Woods, Wilton, near Salisbury. I believe it is a very rare thing to see in the South of England; but most unfortunately it met the fate of a good many of our rare and noble feathered visitors: it was shot by a gamekeeper on February 22. The last record I could find of an eagle visiting Salisbury was in 1829, when one perched on the vane of the Cathedral one afternoon and stayed till next day. A plot, it appears, was made to shoot it with a rifle-ball, and a party went up to the "eight doors," but their endeavours were baffled by the large ball which projects below the cross. Early next morning the eagle flew away southward, unharmed.

Until about ten years ago, when the spire was restored, I believe a cormorant used to visit the Cathedral spire.

Dunollie, Bourne Avenue, Salisbury. A. D. R. BACCHUS.

223. Massacre of the Innocents on the Serpentine.—The destruction by dogs of the young of the black swan and other waterfowl, referred to again by Mr. Macpherson this month, should receive attention from the authorities. This carnage has been going on for some years to my own knowledge, and it really seems pitiable. When forsaken by their parents could not the birds be removed to other more protected waters until they are full grown? A small portion of the Serpentine itself might even be enclosed and reserved as a nursery.

J. E. SAUL.

63, *Gondar Gardens, West Hampstead, N.W.*
March 9, 1905.

224. The Wheatear in Hyde Park.—Referring to Mr. Macpherson's remarks on the non-occurrence of the wheatear in Hyde Park in his interesting "Notes on London Birds" in this month's NATURE NOTES, it is perhaps worth mentioning that I saw one of the birds on the grass near the Grosvenor Gate on September 16 last. J. E. SAUL.

225. February Jottings.—Here, in Herefordshire, one gets a full view of the Black mountains of Radnorshire. They are looking very grand now, for they are gleaming white in the morning sunshine under a mantle of freshly fallen snow. They remind one of real Alps! Far away to the west of them the Brecon Beacons stand out clear against the sky, looking for all the world like a second Vesuvius and Monte Corno.

There is a blackbird with white feathers on his head who must be a native of this farm, for he is to be seen about daily and never leaves the place. The fowls peck him if he comes near them. He is both greedy and tame. He often perches on some old box-shrubs to receive crumbs which are readily thrown to him. What little freak of Nature put those white feathers on his head?

The robins were mating here in January, and one day in the middle of the present month I heard a lark sing for the first time this year. It was a sunny day, marvellously sunny for the season. Up on the top branches of an apple-tree starlings sat parling and chattering like little parraquets in the sunshine. Two bullfinches flitted in and out amongst some gooseberry bushes whose buds they pulled and scattered on the ground to their satisfaction, just as their kind scatter the down on thistles in summer-time. A beautiful cock pheasant came screaming overhead and dived into a richly wooded copse near, glittering like a fairy thing as he shot through a forest of saplings so close together that the only wonder was he did not dash his gorgeous head to pieces in his swift flight. Not far off some hen pheasants were feeding amidst fallen leaves. Every now and then they looked up with the quick movement of the head so characteristic of game birds. A brace of partridges, the remnant of a covey of eight, suddenly rise as I approach, and rush away flapping their strong wings. The hen pheasants glide quickly under cover.

F. E. BIRKETT.

226. **Fowl Language.**—Mr. G. T. Rope has tabulated some of the language of the domestic fowl. There is, however, a most important sound he has not noted, that is the note of warning or alarm. It is made by both cocks and hens when there is danger, but is made most often by a hen with a brood of chickens when she sees a crow, hawk, or anything predatory near her brood. It is a sound that can be imitated fairly well by human beings. To make this sound say ker-r-r-r-r, the tongue being held near the roof of the mouth and a trill made. When heard all the fowls near look up and the chickens run to hide in the long grass, hedge, or other convenient place. If Mr. Rope will listen for the sound, then imitate it, he can alarm the fowls any time.

Spanish Place, London, W. T. R. Allinson.

227. **Joint Nesting.**—Mr. Bellingale's letter in the March number reminds me of a somewhat similar case which I came across some years ago. One day I discovered a nest containing three chaffinch's eggs. About ten days later I happened to be passing the nest, so climbed up to it and was surprised to find in it not three chaffinch's eggs as before but the same number of hedge-sparrow's eggs. This seems rather extraordinary. It was undoubtedly the same nest.

112, *Thirlestaine Road, Edinburgh.* R. C. Lowther.

228. **Rooks and Potatoes.**—With regard to Mr. Whiting's reply to the statement that potatoes of the exact size of rooks eggs are found on the ground under rookeries in autumn and spring, namely, that they are brought to the nests by the rooks in autumn for a winter store, may I ask whether potatoes of that size are to be found in the fields in autumn? Have not the potatoes all grown much larger than that at that time of year? If such small potatoes do not exist in the fields at that time, of course they could not have been taken to the rookery as winter stores, but must have been brought the previous spring, and those on the ground have remained there till the autumn.

Hampstead. Peter Hastie.

March 6, 1905.

229. **Honey-dew.**—In spite of a feeling that running counter to Mr. Peter Hastie is somewhat a serious affair, I venture to offer a few comments on his remarks about honey-dew (p. 54). Mr. Hastie asks, "If honey-dew is the product of aphides, how is it that it is never seen except after a day or two of an extraordinarily hot sunshine?" and that its attack "never comes more than once in a summer, and never in a summer when there is no excessive heat?" Miss Ormerod, in "Agricultural Entomology," states that the life-history of those kinds of aphides "which chiefly frequent our crops may be given generally thus. The wingless females, which are produced very soon after the males in autumn, lay eggs, sometimes singly, sometimes in clusters. From these eggs in the following spring, or possibly before, young aphides hatch which are all females: they go quickly through their changes up to the perfect state, and then they produce living young which also are females. These successive generations of living young, still all females, some of which are winged, some wingless, go on, until in autumn the last generation occurs, which is of males as well as females; and the females of this, as we said before, instead of producing living young, produce eggs which start the next year's attack." And in "Our Insect Enemies," by Theodore Wood, we find it stated that honey-dew is produced by aphides "in quantities proportionate to the abundance of the food supply, a drop of the fluid gradually forming at the extremities of the cornicles, and falling off after a time to give place to a successor. The sap of the plant on which they feed passes so rapidly through the system that its ejection is almost continuous."

It is true that hot, sunshiny weather is favourable to their development and activity; and also true, as Wood remarks, that on "hot summer days the winged forms often hover over the trees and void their juices while on the wing"; but the deposit of this honey-dew or "juice" goes on, though it may be in reduced quantity, in a cold season wherever there are aphides, at all times during the summer, whether there be "extraordinarily hot sunshine" or not. Prolonged wet is very fatal to them; and though severe thunderstorms, such as we had here last year, wash away and destroy a great many of the insects and their traces, they are always to be found in the summer months by those who know their

habits, and where to look for them. I will undertake to find them and their excretion, honey-dew, on the plants or trees round my premises on any day the summer through, and in any summer, wet, dry, hot, or cold.

Mr. Hastie states that aphides are "found on only a few kinds of trees." Will he kindly tell us what those few are? With the exception, perhaps, of the yew, hardly any indigenous tree is free from their attacks. Our forest trees, our fruit trees and vegetables, our corn and root crops, even the thistle, and many other common weeds, are frequently infested by them. "There seems to be hardly a forest tree or crop plant in this country of which we can say that it is not infested by one or more kinds of aphides, either above or under ground" ("Agricultural Entomology").

Can Mr. Hastie produce authority to upset my comments?

EDMUND THOS. DAUBENY.

NATURAL HISTORY QUERY.

48. Cloud Columns.—I should like to make known to your readers an unusual phenomenon I observed on the afternoon of Saturday, March 11. I was in the reading-room of our local "Y.U.," looking through the window, when my attention was directed to a "waterspout cloud formation." Unfortunately I did not see the clouds in course of formation, so am deprived of giving you any lengthy description. The clouds which were affected by the phenomenon were confined to a limited area and were seen as three columns, as near the shape of a waterspout as it is possible to imagine. The weather on this particular day was unsettled and very windy. If any reader of NATURE NOTES will tell me the probable cause, I shall highly esteem their suggestions, whether assumed or based upon facts.

6, *Brunswick Street, Canton, Cardiff,* J. W. COOK.
March 13, 1905.

SELBORNE SOCIETY NOTICES.

[NOTE.—ALL ANNOUNCEMENTS WITH REGARD TO MEETINGS OF THE CENTRAL SOCIETY OR BRANCHES WILL BE FOUND TOGETHER AT THE END OF THESE NOTICES.]

New Members.—*Central Society*—Mrs. Stenton Covington, Norwood; Miss Lucy A. Duxbury, Richmond; Matthew Davenport Hill, Esq., M.A., F.Z.S., Eton College; Mrs. Jenkins, Enfield; Captain Kilham, R.N., Nottingham; Miss Moodie, Wimbledon; Mrs. Oates, Castle Hedingham; Miss J. M. Percival, Fortis Green; Oliver Pike, Esq., Winchmore Hill; Mrs. Purvis-Purvis, Dunton Green; the Rev. Arthur Shipham, Gainsborough; James A. Stiff, Esq., F.Z.S., Wimbledon; Miss Constance M. Thomas, East Twickenham: Miss M. C. Tosh, Wimbledon; Miss A. Tudor, Hadley.

Birmingham Branch—Sir Hallewell Rogers, Lady Rogers, Edgbaston; Mrs. Allan Tangye, Edgbaston.

Croydon Branch—Miss C. Sharman, Croydon; George Wilson, Esq., Mrs. George Wilson, Streatham.

Hampstead Branch—J. Cofman-Nicoresti, Esq., Hart Street, W.C.; H. P. Cooper, Esq., Hampstead; Miss A. Cottam, Walsall; C. W. Cunnington, Esq., M.R.C.S., D.P.H., West End Lane; Miss Kate Levy, Miss Frances Martin, Hampstead; Jacob Myring, Esq., Miss Alice Myring, Richmond; Mrs. T. L. Paterson, Upper Wimpole Street, W.; Mrs. H. Plowman, Haverstock Hill; Miss E. E. Potter, Hampstead.

Donations to the Fund for Restoring Selborne Church.—At the Council Meeting, held on February 28, the sum of five guineas was voted towards the cost of restoring Selborne Church and its bells, and this donation, together

with one of 10s. from Sir Frederick Pollock, Bart., has been forwarded to the Vicar, the Rev. Arthur Kaye.

Status of Associates.—At the same meeting it was decided that for the time being Associates (Members of Junior Branches, under age) should be entitled to attend all those Saturday Afternoons and Rambles which are not announced as "for members only."

Subscriptions.—The Council has great pleasure in acknowledging subscriptions of greater value than 5s. from the following members: Mrs. W. Greenwood, £1 1s.; H. Chippenfield, Esq., 10s. 6d.; Lady Joyce, 10s.; L. C. Lowther, Esq., 7s. 6d.; Rev. Arthur Shipham, 7s. 6d.; Miss L. Duxbury, 6s.

Library.—The Honorary Librarian will attend at 20, Hanover Square, from 6 p.m. to 6.30 p.m. on the evenings when the Publications Committee meets (at present on the second Monday in the month), for the purpose of issuing books to members.

The Honorary Librarian has pleasure in announcing the following additions to the Library: "Natural History of Selborne," 2 vols., octavo, Second Edition, 1802, bought by the Society; "The Country Day by Day," by E. Kay Robinson, and "Birds I Have Known," by A. H. Beavan, kindly given by the Editor; and "The Amateur Poacher," "Field and Hedgerow," "The Gamekeeper at Home," "Hodge and his Masters," "The Life of the Fields," "Nature near London," "The Open Air," "Red Deer," "Round About a Great Estate," and "Wild Life in a Southern County," by Richard Jefferies, kindly given by Geo. Avenell, Esq.

The Honorary Librarian appeals for copies of the various editions of Gilbert White's "Natural History of Selborne." He holds that one of the chief contents of the Society's Library should be a complete set of these editions. Many Members probably have spare copies on their shelves, and were they to give these to the Library, we should have a fine nucleus for the complete set.

The editions we at present possess are enumerated in the subjoined list of books in the Library.

SELBORNE SATURDAY AFTERNOONS.

February 25.—On this afternoon, Lambeth Palace, the town residence of His Grace the Lord Archbishop of Canterbury, was visited by a large party of Selbornians. Meeting outside, near the Parish Church, the party passed through the gateway in the tower, rebuilt in 1540, by Cardinal Morton, whose methods of extorting money for King Henry VII. are described in history as "Morton's fork." It is on the site of the old "Great Gate," and here the dole to the poor has been given since the reign of Edward I. The groined roof of the gateway is very fine. The rooms above, in one of which the Cardinal used to sleep, and which still has his bed-place—a sort of cupboard—are now occupied, and so are not shown.

It is a matter of surprise that this tower and that of the Parish Church should have been built so close together, as it must have constituted a danger, in times when the Palace was fortified, for its principal entrance to be commanded by a stone tower in such close proximity.

In the narrow alley between these towers the Queen of James II. took shelter during her flight from England with her baby, afterwards known as the "Old Pretender."

After the Civil War Lambeth Palace was given to Scot and Hardyng, two of the regicides, who pulled down the Great Hall and sold the material, besides committing other acts of vandalism. It was rebuilt on the old plan, after the Restoration, by Archbishop Juxon, who accompanied Charles I. in his last moments, the fine Gothic ceiling being reproduced and forming a striking feature of the present edifice. It is now used as the Library, and it was in this room that the great trial of the Bishop of Lincoln was held a few years ago.

The Librarian, Mr. S. W. Kershaw, M.A., had kindly attended specially in order to give assistance to the party. He pointed out a number of the finest manuscripts and illuminations in the collection.

The Guard Room was built in the fourteenth century, and the walls used to be hung with suits of mail for the men-at-arms. These have given place to a fine series of portraits of the Archbishops of Canterbury, and the apartment is now

known as the State Dining Room. The earliest portrait is that of Arundel, who crowned Bolingbroke, and who has the unenviable distinction of having sent the first martyr, William Sawtre, to the stake in 1401. The most highly prized is that of Archbishop Warham, by Holbein; there is one of Laud, by Vandyke, and a very fine one by Hogarth, in striking contrast to his many better known works. There is also a sketch of Juxon, taken after death, from which the larger portrait was painted.

Proceeding along the corridor, in which are some very interesting engravings, &c., the Water Tower, better known as the Lollards' Tower, is reached. It was built by Archbishop Chicheley in 1434-5, and at that time was washed on two sides by the river. A door from this room opened on to a flight of steps by which the boats were reached. Here Essex, formerly an honoured guest, and Anne Boleyn called on their way to the Tower of London. Ascending a narrow staircase the prison was reached, and the inscriptions cut by the unhappy prisoners, who were in some cases chained to the wall, were noticed, as well as the so-called oubliette, by which persons could be dropped into the river, and so quietly got rid of.

It seems somewhat incongruous to find the entrance to the chapel in the lower room of the tower. It is a handsome triple-arched one, and, no doubt, formed the outer doorway before the erection of the tower.

The interior of the chapel has been much mutilated and altered at different periods. Originally commenced about 1190, it was twice demolished by order of the Pope, through the jealousy and intrigues of the Monks. The present edifice was erected in 1244-70, and is Early English in style, with tall lancet windows. These contained painted glass pictures of Bible history, such as may still be seen at St. Chapelle in Paris. Having fallen into decay and been restored by Laud, as was said from pictures in the Mass book, they excited the fury of the Puritans, who entirely destroyed them. Colonel Scot also destroyed the Tomb of the Protestant Archbishop Parker—translator of the Bible—in order, it is said, to convert the place into a dancing hall, an intention not usually associated with Puritans.

After the Restoration the remains of the archbishop, which had been buried "in a dunghill," were re-interred in the chapel and the tomb re-erected.

The inconvenience which might have resulted from such a large attendance was obviated by the kind assistance of the Librarian, one of the chaplains, and the porter, who vied with each other in giving every attention to the party.

Afterwards a few of the more indefatigable ones visited the Parish Church adjoining, which has two very good brasses and a quaint painted window of the Pedlar and his dog. In a truly Selbornian spirit the visit was brought to a close by an inspection of the quaintly sculptured tomb of Tradescant, the naturalist—"Gardener to the Rose and Lily Queen"—about whose works there has recently been some correspondence in NATURE NOTES.

March 11.—Our President, Lord Avebury, was so good as to meet upwards of a hundred Members at the Houses of Parliament on the afternoon of this day and to conduct them over the interesting buildings. The party mustered in Westminster Hall, and here Lord Avebury pointed out a fine fossil coral which lies embedded in the sandstone of one of the steps. Afterwards a tour was made through both Houses of Parliament. Owing to an accident, a time had been chosen at which the public were admitted, and the police regulations allowed of no loitering, hence it was impossible to carry out exactly the intended programme. Moreover, the officials at the entrance were not provided with enough "passes" to admit more than a tenth of the party at a time, and as red-tape makes it absolutely necessary for each visitor to receive one of these from an official in plain clothes and carry it three or four yards so as to leave it in the charge of a policeman, the Members, or at least the majority of them, had to wait while the latter collected and carried back the ivory talismans, and the latter counted them up and entered their numbers. Thus many only arrived at the end of the tour in time to shake hands with the President before he left. His presence and kindly words, which add another favour to the many which he has already conferred upon the Society, were nevertheless very much appreciated. Quite a number of Members took the opportunity of walking through the buildings again, and we

feel sure that the authorities ought to be cautioned against considering the number of visitors returned by the official at the door as being accurate, for all the Members of the Selborne Society were counted twice, and some three times over, during the afternoon.

NEWS FROM THE BRANCHES.

Birmingham and Midland.—Upwards of a hundred members and friends assembled at "Westbourn," Edgbaston (by the kind permission of Mr. and Mrs. C. W. Dixon), on Thursday, March 2, to hear a lecture by Mr. Reginald Hudson.

The lecturer, taking his subject from "Some Warwickshire Birds," dealt with the life and habits of many of the feathered tribe which are familiar to dwellers in the Midlands, and illustrated his remarks by a large number of beautiful lantern photographs, chiefly of the nests and eggs with their natural surroundings. The lecturer wound up with an interesting account of the early days of a cuckoo, showing the peculiar methods which that bird adopts with a view to monopolising the home of his foster-parents.

Mr. Priestley Smith presided, and at the close proposed a hearty vote of thanks to Mr. Hudson, which was seconded by Mrs. C. E. Mathews, and carried by acclamation.

Hampstead.—At the Town Hall, Haverstock Hill, on February 28, Mr. R. Garraway Rice, F.S.A., gave a lantern exhibition of places and buildings of archæological interest to a numerous company, which, it was gratifying to notice, included many new members of the Society. At the outset Mr. Rice disclaimed the notion of a lecture: his purpose was rather to indicate the disadvantages of the camera as an aid to archæological research. The photographs were all taken by Mr. Rice himself, some of them under adverse conditions, and some even surreptitiously. Over a hundred slides were used, and of nearly all of them Mr. Rice had something to say, generally of a historic, though occasionally of a humorous, character. Early in the series came White Horse Hill near Uffington, but from present outlines it would be difficult to recognise the horse, which was supposed to commemorate a victory gained by Alfred over the Danes. Then followed views of Sussex churches, of the old kitchen at Hampton Court Palace, with its curious utensils, and of the vaulted roof of Christ Church Hall, Oxford. Also projected on the screen was the so-called King Arthur's Round Table at Winchester. Going northwards, Mr. Rice laid Yorkshire under contribution, and from its richness in ancient monuments the county yielded a fine display. To the archæologist and antiquary what place could offer greater attractions than York? Unlike Chester, it has preserved its gates, and as these, with the posterns, bits of old streets and odd nooks and corners passed across the sheet they evoked considerable applause. Tombs in York Minster were well brought out, as well as the cloisters at Fountains Abbey, while some splendid pictures of Ripon Cathedral were shown.

The Chair was filled by Mr. W. Paley Baildon, F.S.A., whose able address to them at Lincoln's Inn in March last year Selbornians will remember. Others taking part in the proceedings were Mr. Seymour Lucas, R.A., Mr. F. C. Channing, Mr. H. Plowman, F.S.A., and Mr. Bruce Bannerman, F.S.A.

The Committee of the Hampstead Branch has pleasure in acknowledging subscriptions of greater value than 5s. from the following members: Miss Frances Martin, £1 1s.; Mrs. M. L. Cooke-Yarborough, senr., 10s.

North Middlesex (Junior).—On Friday, March 3, Master C. M. Grint, Associate of the Society, read a very interesting paper, the subject being "Life in the Aquarium." Mr. C. M. Hall, M.M.S., occupied the Chair. The essayist dealt with the natural history of the common inhabitants of our rivers, ponds, lakes and ditches, including amphibians, fishes, mollusca, insects and crustaceans. He demonstrated by means of living specimens, which in most cases he had watched through their-life history, his paper being drawn from his own observation of their habits. At the close Mr. Hall said it had given him great pleasure to hear the paper, and urged the Associates present to persevere in their studies with a view to becoming practical naturalists, and so prove useful in carrying out the objects of the Society when they became full members, which he hoped some

of them would in the very near future. The proceedings closed with a vote of thanks to Master Grint for his very instructive paper, on the proposition of Mr. G. Brooks, Member of the Society, who was present at the meeting.

Arrangements are being made for a series of naturalist's rambles during the coming season, under the direction of Mr. Hall and others.

FORTHCOMING EVENTS.

Central Society.

Business Meetings.—The next meeting of the Council will be held on Tuesday, April 25, at 5.30 p.m., and the Publications Committee will meet on Monday, April 10, at 5.30 p.m.

Annual Meeting and Conversazione.—The Annual Meeting and Conversazione will be held in the Theatre and Halls of the Civil Service Commission (old London University buildings), Burlington Gardens, New Bond Street, W., on Wednesday, May 3, 1905, from 7.30 to 11 p.m. The Right Hon. Lord Avebury, D.C.L., F.R.S., will preside. All full Members are entitled to one non-transferable ticket, and to purchase others for their friends at a nominal price (one shilling). Members of the Central Society will receive their tickets by post without application, but must obtain guests' tickets from the Hon. General Secretary (Wilfred Mark Webb, 20, Hanover Square). Branch Members and Associates must apply to their local Hon. Secretaries for all tickets. Associates and Adherents will receive tickets upon payment of one shilling, and they will be granted tickets for their friends at the same price.

N.B.—No guests' tickets will be issued unless a remittance be sent, and under no circumstances will they be available unless signed by a Member, Associate, or Adherent.

Selborne Saturday Afternoons.

April 8.—Kew Gardens. Guide, Professor Boulger. Assemble at the main entrance (Kew Green) at 3 p.m.

This will conclude the Selborne Saturday Afternoons for this season.

Field Club Rambles.

April 29.—Ramble round Chipstead. Take return tickets to Chipstead: 2s. S.E.R., Charing Cross, 2.6; London Bridge, 2.15. *Change* at Purley. Guide Mr. Matthew Hunt.

May 6.—Rickmansworth. Walk through Moor Park to Batchworth Heath. Tea at Ye Olde Greene Manne, 5.15. (9d. each). Returning by field paths to Northwood. Baker Street (Metropolitan), 2.15; Swiss Cottage, 2.18; Finchley Road, 2.20. Special return tickets (Rickmansworth) for 1s. 7d., can be obtained at *Baker Street Station only*. Guides, Messrs. C. M. Hailes and Geo. Avenell.

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1. All communications for NATURE NOTES must be authenticated with name and address, not necessarily for publication.

2. The return of an unaccepted contribution can only be guaranteed when it is accompanied by a stamped and addressed envelope. We cannot undertake to name specimens privately, to return them, or to reply to questions by letter.

3. All communications for any number must be in the Editor's hands by the 10th of the preceding month.

4. Communications for NATURE NOTES, books for review, specimens for naming, &c., should be addressed to the Editor, PROFESSOR BOULGER, F.L.S., F.G.S., 11, Onslow Road, Richmond, Surrey.

5. For the supply of the Magazine to others than members, or for back numbers (except in the case of new members), address the publishers, with stamps at the rate of 2½d. per number, Messrs. JOHN BALE, SONS AND DANIELSSON, Ltd., 83-91, Great Titchfield Street, London, W.

6. Letters connected with the business of the Society, subscriptions, and applications for membership, should be sent to the local Honorary Secretary, or to the Honorary General Secretary of the Society, WILFRED MARK WEBB, F.L.S., at 20, Hanover Square, London, W.

BOOKS IN THE LIBRARY OF THE SELBORNE SOCIETY.

(*Continued from p.* 40.)

Gibson, F. Superstitions about Animals. (1904)
Hackwood, F. W. Kindness to Animals. (1892)
Haggard, H. Rider. A Gardener's Year. (1905)
Hart, H. C. The Flora of Donegal. (1898)
Harting, J. E. Extinct British Animals (Extinct within Historic Times). (1880)
Henslow, Rev. Prof. G. South African Flowering Plants. (1903)
Hett, C. L. Birds Dictionary. (1898)
,, ,, Glossary of Popular and Local Names of British Birds. (1899)
Howitt, Wm. Year Book of the Country
Hudson, W. H. Birds and Man. (1901)
Jefferies, Richard. Amateur Poacher. (1903)
,, ,, Field and Hedgerow. (1904)
,, ,, Gamekeeper at Home. (1896)
,, ,, Hodge and his Masters. (1890)
,, ,, Life of the Fields. (1904)
,, ,, Nature near London. (1905)
,, ,, Open Air. (1904)
,, ,, Red Deer. (1903)
,, ,, Round about a Great Estate. (1903)
,, ,, Wild Life in a Southern County. (1903)
Johnson, W., and W. Wright. Neolithic Man in North-East Surrey. (1903)
Kearton, R. Wild Nature's Ways. (1903)
,, With Nature and a Camera. (1898)
Kerr, Richard. Nature, Curious and Beautiful. (1903)
Kirby, W., and W. Spence. An Introduction to Entomology, 2 vols. (1818)
Kirby, W. E., and A. W. Kappel. Beetles, Butterflies, Moths and other Insects. (1892)
[Knapp, J. L.]. Journal of a Naturalist. (1829)
Kneipp, S. Plant Atlas. (1893)
Lankester, Mrs. Wild Flowers Worth Notice.
Larter, C. E. Minehead, Porlock and Dunster (Homeland Handbook). (1904)
M'Alpine, D. Biological Atlas. (1881)
Malleson, Rev. F. A. Holiday Studies of Wordsworth. (1890)
Marchant, J. R. V., and W. Watkins. Wild Birds Protection Acts. (1897)
Margesson, Lady Isabel. Handbook of Natural History for Beginners. (1894)
Marshall, W. Nature as a Book of Symbols. (1893)

Martin, A. Home Life on an Ostrich Farm. (1890)
Martin, E. A. Amidst Nature's Realms. (1892)
,, ,, Bibliography of Gilbert White.
,, ,, Glimpses into Nature's Secrets. (1892)
,, ,, Story of a Piece of Coal. (1896)
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Moor, J. F. Future State of Animals. (1893)
Morris, Rev. M. C. F. Memoir of Francis O. Morris. (1897)
Murche, V. T. Animal Physiology.
Pike, Oliver G. In Birdland with Field-Glass and Camera. (1900)
Prince, C. Leeson. The Astronomy and Meteorology of Aratus. (1895)
Prince, C. Leeson. Crowborough Hill Meteorological Records. (1885)
Prince, C. Leeson. Crowborough Hill Meteorological Records. (1898)
Roberts, C. Naturalist's Diary. (1886)
Robinson, E. Kay. In the King's County. (1904)
,, ,, The Country Day by Day (1905)
Sandford, E. Manual of Exotic Ferns and Selaginella. (1894)
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Scott, Clement. Among the Apple Orchards. (1895)
Selous, Edmund. Beautiful Birds. (1901)
,, Bird Watching. (1901)
Sharpe, R. Bowdler and. C. W. Wyatt. Monograph of the Hirundinidæ, 2 vols. (1885, 1894)
Smith, W. G. Dunstable (Homeland Handbook). (1904)
Sterland, W. S. Birds of Sherwood Forest. (1869)
Suckling, F. H. Lectures for Children—The Ant.
,, ,, ,, Frogs and Toads.
,, ,, ,, The Spider.
,, ,, ,, Useful Birds.
Swann, H. K. Birds of London. (1893)
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,, Woodside, Burnside, Hillside and Marsh. (1894)
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White, A. E. Holt. Butterflies and Moths of Teneriffe. (1894)
White, Gilbert. Natural History of Selborne. Second Edition, 2 vols. (1802)
White, Gilbert. Natural History and Antiquities of Selborne. Rennie's Edition. (1833)
White, Gilbert. Natural History of Selborne. (Edited by Rev. J. G. Wood). (1853)

(To be continued.)

Nature Notes:

The Selborne Society's Magazine.

No. 185. MAY, 1905. Vol. XVI.

OBJECTS OF THE SOCIETY.

To promote the study of Natural History. To preserve from needless destruction such wild animals and plants as are harmless, beautiful, or rare. To discourage the wearing and use for ornament of: (1) The skins and furs of such animals as are in danger of being exterminated; (2) the skins and plumage of such birds as are not domesticated. To protect places and objects of natural beauty or antiquarian interest from ill-treatment or destruction. To afford facilities for combined effort in promoting any of the above or kindred objects.

SELBORNIANA.

The Annual Meeting and Conversazione will be held, as already announced, by kind permission, in the Theatre and Halls of the Civil Service Commission, Burlington Gardens, on the evening of May 3. Lord Avebury will give the annual address, Mrs. Dukinfield Scott will show her kammatograph pictures of opening flowers, Mr. Enock will describe the work of a wood-boring wasp with the help of some moving slides, Mr. Oliver G. Pike will contribute a short lecture, and Mr. Percival Westell has promised to give an account of the actions of a young cuckoo and to show photographs in illustration of them. There will also be many exhibits, including microscopes lent by members of the Royal Microscopical Society and the Quekett Club. For particulars see the notice at the end of this number.

The Preservation of Mitcham Common.—We have received the following from Mr. E. A. Martin:—

The chequered career which characterised Mitcham Common from the most ancient days until 1891, when Conservators were appointed under the

Metropolitan Commons Act of 1875, did not, unfortunately, cease with that event. Events have marched rapidly since, two years ago, indignation meetings were held at Mitcham, to protest against the action of the Conservators in prosecuting certain men for turning their animals out to graze upon the Common. To be brief, I may say at once that the prosecutions have ceased. In the last case, the magistrates found that a *bona fide* claim of right of pasturage had been made out, not only for the commoners, but for the inhabitants of Mitcham, and they considered that their jurisdiction was thus ousted. No appeal was made by the Conservators to a higher Court, the Chairman very candidly telling the members of that body that he did not consider it would be worth their while doing so.

But the matter did not end there. A storm had been raised, and though the prosecutions had dropped, the subject could not be left where it was.

A statement of the history of the Common since the Conservators were first appointed was demanded in the Croydon County Council, and this has recently been published. It is a document of very great interest. Of course, the whole trouble has been caused by the manner in which the Golf Club has been allowed almost to monopolise nearly 400 acres of the Common. In the Council Report, the whole history of the leases, or licences, to the Club has been made public. The Club is in the position of owning the rights, for what they are worth, of two of the lords of the manors, whilst the Conservators own the remainder. When the Mitcham Common Supplemental Act of 1890 was passed, there was something of a race as to who should buy up the various lords' rights the soonest, with the result as mentioned.

The Golf Club was granted a lease which will not expire until 1930, on the condition that they transferred their rights as lords of manors to the Conservators, the latter to have the option at the end of that period of paying compensation to the amount of £2,500, or of continuing the licence. The terms of the agreement have been vigorously attacked in Croydon, and the County Council has ordered a further enquiry, which will undoubtedly have far-reaching effects.

The Selborne Society is naturally interested in all matters pertaining to open spaces, and this one is easy of access and comparatively near to South London. The Common has an interesting flora, and a good deal of it is in a wild condition of Nature. The laying-out of golf-greens tends to spoil its picturesqueness, and it is undoubtedly time to arrest the development of golf-playing there.

The Golf Club pays a rent of £250 per annum to the Conservators, and it has been stated that no similar ground could be had elsewhere so near to London for less than a £1,500 rent. The Croydon County Council has now demanded a further enquiry. Its scope is very wide, and will include the determination of the legal rights of the manor lords, commoners, the inhabitants of Mitcham and Croydon, and the general public. It will judge of the validity or otherwise of the licence to use the ground which the Golf Club now holds. This is the most important of all. It is also to consider under what terms the licence could be revoked, even if the licence be determined as holding good in law.

Members of our Society in Croydon and Streatham are watching keenly the events which are taking place in regard to this Common, owing to their local interest in the matter. But the enquiry is also being watched in other parts of London, and when complete, it will have a permanent value in the eyes of those who resent the extinction or loss of public rights on common lands.

A Correction.—Mr. R. Garraway Rice, F.S.A., writes to us in reference to the report of his lantern exhibition at the Town Hall, Haverstock Hill, on February 28, in which it is stated that his purpose was "to indicate the disadvantages of the camera as an aid to archæological research." This, of course, should have been "advantages." "I shall be obliged," says Mr. Garraway Rice, "if you will insert this correction in your next issue, for when I exhibit slides of buildings, &c., of archæological interest, it is my invariable practice to point out the great 'advantages' of the camera as an aid to archæological research."

INSANITY IN SUSSEX.—Several correspondents have naturally called our attention to the following record:—

"*The Sussex Daily News* of to-day (Wednesday, March 29) says that during the past winter members of the Bodle Street and District Rat and Sparrow Club, near Herstmonceux (Sussex), killed 4,143 rats and moles, 40 stoats, 40 rooks, jays, bullfinches, magpies and hawks, 615 blackbirds, larks and linnets, and 2,994 sparrows, starlings, greybirds and chaffinches. The member who secured most heads and tails got a prize of £2, the second a sovereign, third 15s. 6d., and fourth 7s. 6d. The rules of the Club provide that a fine shall be imposed on members failing to bring in twenty units every fortnight. Rooks, jays, bullfinches, magpies, hawks and stoats count three points; rats, moles, blackbirds, larks and linnets two; sparrows, starlings, greybirds and chaffinches one."

Greybirds are, we believe, thrushes. Are none of these birds protected all the year round in East Sussex?

THREATENED EXTINCTION OF THE GOLDFINCH.—The goldfinch, perhaps the prettiest bird in the English hedge-row, is becoming scarcer every year, and it is now rarely seen in a wild state around Leeds. Its beauty has been its doom, marking it out as it feeds among the nettles as the special prize for the clever bird-catcher. It is easily sold to the dealers at anything from 3s. 6d. to 8s. 6d., according to song and plumage. Unless the goldfinch is rigidly protected not only during the breeding season, but all the year round, its extinction is not far off.

At the end of February the Wild Birds Protection Act again resumed operations, and professional bird-catchers, who are more numerous around Leeds than is popularly imagined, had to put away their nets or carry on their business with great secrecy and in defiance of the law. For many of them the law has few terrors, and the lax way in which the Act is administered, and the difficulties in carrying it out, make the detection of offenders almost impossible. Even where a fine is imposed the offender usually regards it as an advertisement.—*Leeds Mercury.*

THE COST OF A HAT.—A valued correspondent sends us the following extract:—

In his interesting book, "The Great Mountains and Forests of South America," Mr. Paul Fountain says:—

"As we proceeded I noticed that a flock of turkey-buzzards were hovering overhead, and presently about twenty of these birds flew up from among the trees in front of us. Here was a small clearing with a rough hut in the middle of it, constructed like those we had seen yesterday, and a fire-place which had been recently used. An old tin pot, with a hole burnt in the bottom of it, left no doubt in my mind that the people who had bivouacked here were whites. But my attention was attracted most by a large heap on the ground of what looked like small pieces of raw meat, but which, on examination, proved to be the carcases of birds which had been skinned. The skinning had been performed with a certain amount of skill, the leg- and wing-bones and the heads being severed and carried away in the skins, proving that the latter were required for the bird-stuffer, and I concluded that a party of those rascals who make a trade of catching birds of the finest plumage for the purpose of decorating ladies' hats had found their way hither. Unlikely as it may seem at first glance, there can be no doubt but that a party of those bird-exterminators had found their way to this obscure

spot, and reaped a rich harvest among the beautiful feathered creatures which here swarmed in countless thousands, and were, as yet, so tame that many of them could be knocked down by sticks, or captured wholesale by means of nets. Subsequent enquiry confirmed this opinion, for though I could not trace the particular men who had been there, I ascertained that many of those who are employed by the wholesale dealers travel hundreds of miles to unfrequented spots in search of their lovely prey. These men are a sort of petty hunters, and employ themselves, in the season, in collecting tortoises, iguanas and their eggs for the table, &c., and fill up their time by destroying the birds for the fashion merchant. On the Amazon three or four men in a boat take long journeys, being absent sometimes nine or ten weeks, and returning with a cargo of from three thousand to eight thousand bird skins, all intended as ornaments to ladies' dress. No wonder that some species of birds are almost extinct, even in such a country as Brazil. I wish that the ladies who encourage this cruel trade could have seen the pitiable sight of those mangled little bodies lying in a loathsome heap, to the numbers of several hundreds, while the disgusting vultures lurked in the trees close by, ready to resume their horrid meal the moment our backs were turned. Near the hut a rough ladder, which had been put together on the spot, was resting against the trees, together with several long poles, used, I suppose, to support a net for the capture of the birds. As I learned subsequently, many are dragged from the holes in tree trunks, where they roost at night; others are attracted to a bright light, and knocked down with a stick, or caught in hand nets. Birds of brilliant plumage fetch good prices, and many kinds, particularly humming-birds, and small, brightly coloured finches, are exterminated or driven from whole districts in many parts of South America. The men who profit by, and instigate this abominable slaughter, are said to provide the hunters with preservatives to dress the skins with, and instruct them how to strip the birds without injuring the plumage. Near the hut was a large dark patch teeming with ants. That was the blood of the wretched birds which had been killed by having a penknife driven into the roof of the mouth to avoid spoiling the plumage. Some of these brutal men are said to skin the birds alive, under the impression that the gloss of the feathers is thereby better preserved."

Liverpool Kyrle Society, Flower Branch.—We have much pleasure in calling attention once more to the useful work carried out by this branch of the Kyrle Society, which is in need of more country workers to send boxes of common flowers once a fortnight to town schools. Care is taken not to endanger in any way the continued existence of any species. Those willing to help should communicate with the Hon. Secretary, Miss Jessie L. M. Bird, 4, Riversdale Road, Aigburth, Liverpool.

The School Nature-Study Union.—We have received the first annual report of this society, which already numbers more than two hundred members, is represented in seventeen counties, has organised itself somewhat completely, and has made a good practical beginning in its work, at a very moderate cost.

ARGUMENTS FOR THE RE-DISTRIBUTION OF THE MONTHS AMONGST THE SEASONS.

By E. G. Aldridge, F.G.S., F.R.Met. Soc.

IT has long been my idea that the present distribution is not the best. Summer and Winter may be regarded as the superior or predominant seasons: Spring and Autumn as the inferior or *transitional* seasons. Meteorologically, Summer commences at midnight between May 31 and June 1: astronomically, it does not begin this year till 3 a.m. of June 22. The meteorological season is continued to the midnight between August 31 and September 1: the astronomical season runs on till 5 p.m. of September 23. Now, I would venture to suggest that the commencement of Summer should date from May 22 (inclusive). My reasons for offering this suggestion are that the duration of light is then almost at its greatest; that the mean temperature (all mean temperatures in this article, unless otherwise stated, have been derived from daily maximum and minimum) has risen to a fairly high point (56° at Greenwich); and that the leafing of the forest trees is nearly complete, or, at any rate, advanced very much beyond the *springing*. The counter-argument that frosts sometimes occur at this period is of no worth, as a temperature very little higher than the freezing point is possible at times and in certain places all the Summer through. In the Greenwich records the first instance in the year of a minimum temperature of 60° or upwards is found on May 24 in 1847 (61·3°). This date is just after the beginning of my Summer. Having regard to the high mean temperature of September (in the Scilly Islands it is 1° higher than that of June), to the occasional occurrence of excessive heat during the month, and to the fact that the autumnal tints have scarcely commenced, I would carry on the Summer to the Autumnal Equinox, and allow it to terminate on September 23 (inclusive). Few exceedingly high maximum temperatures have been recorded after the end of the third week of September, and this alone seems to suggest a line of demarcation between Summer and Autumn. By this arrangement 125 days would fall to the lot of the Summer season.

The occurrence of great cold at times towards the end of November appears to show that the Winter season may with advantage be commenced at an earlier date than that now observed both meteorologically and astronomically. Moreover, the length of the day is almost at its shortest; the weather, if not cold, is often changeable and stormy; the autumnal tinting has mostly disappeared; and there is little or no sign of reviving vegetable life, such as we often observe even in January with the advent of hazel blossoms. From near the end of November to Christmas or early in the New Year may indeed be regarded as the "deadest" time of the twelve months. These, I think,

are very good reasons why Winter should be considered as commencing on November 21 (inclusive). As March is often a cold month (notwithstanding its display of crocuses and daffodils), I would extend the dominion of Winter to the Vernal Equinox, and allow it to end on March 20 (inclusive). The counter-argument that many plants are now in bloom is of little force, as flowers, both wild and cultivated, may often be seen even in January. It should be remembered that Winter has its blossoms as well as Spring. The primrose, pilewort, lesser periwinkle, violet, dog-mercury, crocus, daffodil, &c., are all hyemal as well as vernal. When we examine the temperature statistics we find that the minimum temperature of the nights of March is, on the average, not very much higher than that of the nights of January. At Ross (Herefordshire), for instance, the difference is but 1·5°, and in the Scilly Islands it is only 0·2°, and this is in favour of January. Indeed, taking night and day together, March in these islands is but 0·3° warmer than the first month of the year. Another argument in this connection is that at the Vernal Equinox the forest trees, with the exception, perhaps, of the more sheltered larches, have scarcely begun to put forth their leaves, and the general aspect of the woodlands is then decidedly hyemal. If this arrangement were adopted, the Winter season would consist of 120 days. The transitional season of Spring would have 62 days, and that of Autumn 58. In Leap-year, Winter, of course, would have 121.

Having regard to the long duration of the Summer and Winter seasons, I would divide them both into "Early," "Mid," and "Late." In Summer the first division would end with June 30, and would have 40 days; the other two would have respectively 43 and 42. In Winter the first division would terminate on December 31, and would consist of 41 days; the remaining two would contain respectively 40 and 39.

My Midsummer-day is July 23 (64·1° at Greenwich). It is a well marked day, for the mean temperature afterwards falls considerably on the average of fifty years, and does not again reach 64° or upwards till August 7.

Further remarks as to November are desirable. At about 5 p.m. of November 28, 1890, the temperature at Beddington, Surrey, was almost unbelievably low, viz., 2·3°. I think that wood was heard to crack with the cold. Singularly enough, on the 29th the minimum at Madrid was 9·5°—positively the lowest on record during the period from 1860 to 1894. At Ross, only last November, the minimum of the 24th was 11·1°, while the maximum did not exceed 30°! Quite early in the meteorological Winter (December 4 in 1879) the lowest temperature (23° below zero) ever recorded in the British Islands took place at Blackadder in Berwickshire; and although this value is looked upon with much suspicion, there is no doubt that the weather then was excessively severe. It sometimes happens that the minimum temperature of November is also the minimum of the Winter.

At Barnstaple, for instance, the lowest temperature recorded last November was 20° on the 27th, and this value still remains the lowest of the entire season up to the date (March 18) of revising this article. These notes concerning the month of November are well worthy of attention. Can it be that the warmth of the ocean off Western Europe and the latent heat thrown out during the autumnal rains lead to the setting-in of a chill current of air from northerly or easterly regions, in which the cold of Winter is then beginning to make itself strongly felt? We all know how a draught enters with unpleasant strength into an overheated chamber. If this explanation be correct, our coast-towns, still protected from a great degree of cold by the warm water, might not suffer greatly; but inland localities, especially with a clear sky and with conditions favourable to nocturnal radiation, might be exposed to severe frost. The Beddington reading must have been an extremely delicate matter, if I may employ the word "delicate" in connection with the strong grip of Winter. Even a passing umbrella might have caused the temperature to tend upwards. The lowest value at Greenwich on the same day (and indeed throughout the fifty Novembers) is 18·3°; and this comparatively high reading was doubtless due to topographical peculiarities, to a greater share of London's smoke-canopy, and to the importation of a little warmth by the tidal water of the Thames.

The results of the Greenwich meteorological observations from 1841 to 1890 show that the mean temperature of the Summer is 61·2°, and of its divisions respectively 59·5°, 63·6°, and 60·5°. This result is very satisfactory: it indicates, for instance, that the first division is of a supravernal character, while the next (the true Midsummer) is distinguished by a very marked increase of heat. The mean temperature of the Winter is 39·8°, and of its sections 39·9°, 38·6°, and 40·8°, revealing a range much less than that of the Summer. Spring claims a mean temperature of 48·8°, and Autumn one of 48·9°. It is instructive to note that the hottest day of the year, on the average, is July 15 (65·2°). On this date, in 1881, the maximum temperature reaches 97·1°, and this high reading seems to have a visible influence on the fifty years' mean of that day. August 13 is also a very warm day, the mean reaching 64·5°. On this date, in 1876, the maximum is 92·6°; the Meteorological Office, however, reports a maximum of about 96° as having occurred in London (Brixton). 92·6° is not the highest known at Greenwich in August, as, on the 11th, in 1884, the temperature touches 94·2°. The coldest day, on the average, is January 12 (37·0°). July 15 and January 12 occur only a week before the *middle* of the Summer and Winter respectively. It might reasonably be supposed that the long mean of fifty years would have rendered a large difference between two consecutive days almost impossible, but this is not the case. For instance, July 2 is 1·4° warmer than the 1st, and the 15th is 1·1° warmer than the 16th. The results of the

observations have therefore been subjected at Greenwich to a "smoothing" process, after which July 15 (64·35°) still remains the hottest day, though the 16th is practically as warm. January 10 and 11 (37·7°) now rank as the coldest days of the year.

The first maximum temperature of 70° or upwards in March during the half-century takes place on the 24th (70·9°), in 1871; and it will be seen that this almost immediately follows the commencement of Spring. It is interesting to note that on the same day, in 1879, the maximum is only 33·4°, tending to show that Winter endeavours to extend his realm up to about this date. The 16th, in 1845, is the time of the latest occurrence in the early part of the year of a maximum temperature of 32° or below (27·6°). This date is almost on the boundary between Winter and Spring. *Apropos* of the remark that March is in some places very little warmer than January, it may be stated that the mean temperature of March 11 is a mere trifle higher than that of January 31 (40·5°)! Even after "smoothing," the difference is but 1·4°. The latest instances of a maximum temperature of 70° or upwards happening in the Autumn are 71·6° on October 15, 1861, and 71·4° on the same day in 1862. A maximum of 67·3°, however, occurs as late as November 8 in 1847.

From March 22 to April 4 (inclusive) the Greenwich mean temperature rises as much as 5·8°—from 41·4° to 47·2°. It is evident, therefore, that the pulse of Spring commences to beat vigorously at about the time of the Vernal Equinox. Soon after the beginning of the Autumn there is a corresponding fall of the mean temperature. It amounts to 6°—from 56·3° on September 28 to 50·3° on October 13 (inclusive).

It has been stated that when the mean temperature has risen to 42°, vegetation generally begins to increase. In this connection it is well to observe that the date in March when this mean temperature is not followed by a lower one is the 23rd (42·7°), the day nearly corresponding with the first of Spring. After November 26 (42·5°) all mean temperatures for a time are below 42°, except that of December 6 (42·1°), and the alleged stoppage in the growth of general vegetation happens, it will be seen, soon after the beginning of Winter.

The latest date of the occurrence of a minimum temperature of 32° or below in May is the 24th (1867), and this is only just after the end of the Spring. In September the earliest date is the 27th (1885), and this almost coincides with the commencement of the Autumn. The earliest instance of a maximum temperature of 32° or below at this season is on November 16th in 1887 (29·2°). This day is almost on the line between Autumn and Winter. A maximum of 80° or upwards I see has never occurred in the fifty-year period after September 22 (80·5° in 1848), except (81·0°) on October 4, 1859. The 22nd marks almost exactly the end of the Summer. The first record of a maximum temperature of 80° or upwards in Spring is on

April 27. Against this day, in 1865, a temperature of 81·5° is registered. This date is eighty-seven days before my Mid-summer-day, while that of the 81° in October is only seventy-three after. The first occurrence in the Summer of a mean temperature not below 60° is on June 13 (60·3°); but if we use the mean temperatures resulting from a great number of daily observations, this occurrence is deferred until the 21st (60·8°).

I think that many of the remarks contained in this article are conclusive as to the desirability of recognising a four-months' Summer and a Winter of practically equal duration. A few of the statements may be a little irrelevant to the subject, but they have been allowed to stand on account of their extreme interest.

REVIEWS AND EXCHANGES.

Elementary Microscopy: a Handbook for Beginners. By F. Shillington Scales, F.R.M.S. Baillière, Tindall and Cox. Price 3s. net.

This little volume is precisely what its title represents it to be. It deals in a simple elementary way with the optics of the microscope, the choice of an instrument, its manipulation, and the mounting of objects, many pieces of apparatus being illustrated. We are not sure whether the concise instructions given will suffice to make the careful student an expert microscopist without personal tuition; but they will certainly put him in possession of the principles upon which his work must be based. In a future edition we hope room may be found for some reference to micro-photography and the microspectroscope.

The Camera in the Fields: a Practical Guide to Nature Photography. By F. C. Snell. Fisher Unwin. Price 5s.

In spite of the many beautifully illustrated books on the results of Nature-photography and the methods of stalking living animals for this purpose, there

TOAD. (From "The Camera in the Fields," by kind permission of T. Fisher Unwin, Esq.)

was, we think, room for such a manual as Mr. Snell has here given us. In the varied character and equal excellence of its eighty illustrations, including, as they do, charming bits of landscape, foreground, mammals, birds and their nests,

reptiles, insects, and isolated flowers, it equals, if it does not surpass, any of its predecessors. Though we are still of the opinion that an uncoloured photograph is never a satisfactory representation of a lepidopterous insect, we have seldom, if ever, seen as good photographs of plants as those in Mr. Snell's volume.

Be-dewed Spider's Web. (From "The Camera in the Fields," by kind permission of T. Fisher Unwin, Esq.)

These are, however, but advertisements, so to speak, of the results obtainable; the distinctive value of the book is that, pointing out clearly the special provinces of stalking and of control photography, it gives practical directions, especially in the latter branch of the art, by which any ordinary town-dwelling photographer can make a good start in portraying living beings. We are able, by the courtesy of the publisher, to reproduce three specimens of the illustrations.

FLY ORCHIS. (From "The Camera in the Fields," by kind permission of T. Fisher Unwin, Esq.)

Poisonous Plants of all Countries. By A. Bernhard Smith. Bristol: John Wright and Co. Price 2s. 6d. net.

Medical students will find this compendious summary useful. Its arrangement is medical; but an index enables any particular species to be found. A rather unnecessarily full but uncritical list of vernacular names is given, the toxic principles are named, and symptoms and treatment enumerated for each group of poisons. The plants are concisely described, the terms used being explained in a glossary; but the part of the plant containing the poison is not indicated. Thus, though rhubarb occurs among irritants, there is a note that "this plant has no poisonous properties under home cultivation," a statement hardly borne out by a recent case of the fatal use of the leaves as a substitute for spinach. It is rather startling to find *Narcissus poeticus* and *N. moschatus* put down as British; and, though the printing is good, there are not a few such mis-spellings as *Ranunculus auricormus*, which we shall hope to see corrected in the next edition.

Seaford and Newhaven, with their Surroundings. By George Day. Homeland Association. Price 6d. net.

This admirable guide-book, the thirty-ninth issued by the Homeland Association, is the official publication of the Urban District Council of Seaford. Seaford itself is not a very large or fashionable watering-place, it has the recommendation of possessing neither pier nor parade, but it has very fine golf-links, and the neighbourhood is full of antiquarian interest. Alfriston, with its church, "the Cathedral of the South Downs," its market-cross, the Star Inn dating from the

fifteenth, and the Clergy-house (which the National Trust fortunately secured for a £10 note) dating from the fourteenth century, is certainly worth a lengthy pilgrimage. By the courtesy of the Homeland Association we are able to reproduce here the illustration of Alfriston Clergy-house. With an ordnance

THE CHURCH HOUSE, ALFRISTON. (By kind permission of the Homeland Association.)

map including an eight-mile radius, and many excellent illustrations, this handbook certainly leaves little room for fault-finding; but we venture to plead for the addition of a view of Newhaven Church with its interesting apse.

The Art of Field Observation and Home-Note Making. A Lecture by the Rev. E. Adrian Woodruffe-Peacock. Louth: Goulding and Son. Price 1s, post free.

A many-sided naturalist of the last generation, the Rev. Leonard Blomefield (*né* Jenyns), published a very useful instruction, "How to Observe," and now another many-sided clerical naturalist teaches us how to record our observations. The author speaks of "the double sphere of the Field Naturalist's working life. At one time we are, as it were, in the open air, amid the green pastures, woodlands, and streams of the country, in which the student of nature delights. Then, again, we are by his study table, watching him making notes on the living things he judges to be worthy of permanent record." Without quite equalling Professor Miall in contempt for the mere list-maker, Mr. Woodruffe-Peacock says: "Anyone with patient industry can make reams full of notes—a whole library of them, I might say—but a man of method alone notes the valuable facts, and can refer to them in a second." As an example of his own admirably correlated observations we may quote the following: "In the huge area of drift sand in North Lincolnshire otherwise suitable, the Stone-Curlew can only use the spots where the arrow-head makers of old gathered the flints together, which protect the eggs and young alike by 'sympathetic colouration.'" The whole lecture is most suggestive and might usefully be placed in the hands of any young naturalist.

Epsom College Natural History Society: Report for 1904. Epsom: Andrews and Son. Price 1s. 6d.

On the whole a satisfactory record of a year's work is this report from one of our affiliated school societies. The full phenological records of plants, birds and Lepidoptera, the meteorological report and that on the weights and measurements of the boys are thoroughly well done. As a school society is naturally educational as well as local, the inclusion of a summary of a lecture on a general subject such as "Venomous Serpents" is justifiable; but it is to be regretted that at a time when so much valuable information has been obtained in the neighbourhood on the zones in the Upper Chalk, the Geological Section should be inactive; and it is to be hoped that some of the photographers in the College will turn their cameras upon our wild plants.

The University of Colorado Studies, Volume II., Number 3 (price 50 cents), contains Tables for the Identification of Rocky Mountain Coccidæ, by T. D. A. Cockerell.

The Animal World for April has as frontispiece a large illustration of the Egret, and also contains an article on Disappearing Birds, with illustrations of the Osprey, Ruff, Avocet, Kite, Buzzard and White-tailed and Golden Eagles.

The Royal Society for the Protection of Birds: Report for 1904, besides the incorporation of the Society, has much useful work to record, including the passing of the Pole-trap and St. Kilda Acts.

The Transactions of the Yorkshire Naturalists' Union. Part 31. A. Brown and Sons. Price 1s. net.

In addition to the forty-second and forty-third annual reports of the Union, this number contains reprints of the Excursion Circulars for the last two years. These may well prove valuable, not only as a record for members who were present, but as guides to future visitors. It is a pity that with a view to such permanent preservation the circulars have not been printed on paper and with a page uniform with those of the Transactions.

The Nature-Study Review, No. 2 (March), though still dealing too exclusively with general principles, has articles on school-gardens, on Sachs' tablets for water-culture, and on moulds, or "molds" as they are called in American, so is more interesting than the first number.

Received: *Report of the American Society for the Prevention of Cruelty to Animals for* 1904; *The Plant World* and *The American Botanist* for February; *The Wilson Bulletin* for March; and *The Naturalist, The Irish Naturalist, Nature-Study, The Animals' Friend, The Humanitarian, The Parents' Review, The Agricultural Economist, The Estate Magazine* and *The Commonwealth* for April.

NATURAL HISTORY NOTES.

230. Protection of the Otter.—Is it not almost time that efforts were made to protect the Otter? The Wild Birds Protection Acts have done much for our feathered friends. Why should not the cause of some of our British Mammals be also taken up before they are exterminated? The public prints often proclaim the death of an otter, by the gun or cruel steel trap, with a flourish of trumpets, to the great delight of fishing clubs and syndicates; and this beautiful and interesting animal is gradually being driven from many of its former haunts. The larvæ of dragon-flies and water-beetles cause a hundred times more damage to fresh-water fish than all the otters in the British Isles. Even the tadpole does far more to determine the number of pike in a river like the Thames than the much persecuted otter; for it devours the spawn and the newly hatched pike.

Otters prefer an eel to any other food, and turn over the stones in the water in search of them; and I need hardly say eels are enemies of almost every kind of fish. From my experience of Wales and Devonshire I find that otters and streams full of fish not infrequently go together, and the little river Nar, that runs within 200 yards of my house, confirms that experience in a way that is quite remarkable. Here the Nar is small, clean, and shallow; is as regularly patrolled by otters as the night comes, and on this estate their lives are respected. I find their traces whenever I choose to look for them, and know of more than one track well trodden by their feet. Some young were reared, too, last year; and yet we have a fine stock of splendid trout. The otters' "wedge" on this stream largely consists of the scales of dace, a fish that falls an easier prey to them than the more wily and lively trout. With us the dace is looked upon as a downright nuisance: it gives no sport, consumes the food of more noble fish, and flourishes amazingly. I hope the time will come when shooting or trapping an otter will be thought as great a crime as if it were a fox.

South-Acre, Swaffham. EDMUND THOS. DAUBENY.
April, 1905.

231. Dogs as Hospital Patients.—In an article on "Famous Hospitals and Medical Schools," a writer in the *Practitioner* for April tells a pretty story of three dogs. One Sunday morning, two fox-terriers, who had had some experience of the King's College Hospital, brought a casualty case in the shape of a large dark collie, whose right leg was damaged and bleeding. The collie received beneficial treatment, and it is interesting to know that the dogs were identified as those whose portraits appear on canvas in the Board-room of the Hospital.

37, *Alwyne Villas, Canonbury, N.* CHAS. E. J. HANNETT.
April 9, 1905.

232. Wild Birds Perching on Man.—With regard to Mr. Dewar's enquiry, quoted by you in the April issue of NATURE NOTES, as to "whether any one has ever been perched upon by an adult wild bird in this country," in Hadley Woods, one bitterly frosty day, I was feeding golden-crested wrens with fat mutton scraps, when one perched on my boot. Sitting in a canoe reading the Sonnets, between Stratford and Hampton Lucy, a splendidly plumaged kingfisher perched on my paddle lying on my apron. Lying on the grass near Bruce Park, Tottenham, a swallow alighted on my very old brown soft hat. And finally, once when I was sitting in Monk Wood, Epping Forest, with a map on my knees, a squirrel sprang on to my bicycle and thence on to my shoulder. The machine was leaning against a tree. Another squirrel, in Enfield Chace, came towards me, and when within a foot (in fact he was between my knees, and I was sitting on the ground) he began to chatter and bark. This made me laugh and he scampered off.

St. Francis had the open secret. The dear old sparrow-man in the Tuileries Gardens has it to-day. And it is there for any of us who have the love and thought and time it requires.

Heacham-on-Sea, Norfolk. HARRY LOWERISON.

233. Geese in London Streets.—Among the other members of the feathered tribe in the farmyard one would expect to see geese; but scarcely at

large in the streets of London. Yet, in the Goswell Road and Aldersgate Street, three fine geese are to be seen strutting about at their own free-will, to the astonishment of pedestrians passing through these thoroughfares. They are not above taking any food offered them, but they certainly object to being teased, as a number of their admirers have already found out. The birds' abode is in a van-yard in the Goswell Road, and if they are not in their natural element, their unrestrained liberty has become a familiar feature to the passer-by.

April 9, 1905. CHAS. E. J. HANNETT.

234. Hedge-Sparrow Singing at Night.—When I was out late at night about a month ago, I heard a hedge-sparrow singing. I was not quite sure at the time that it was a hedge-sparrow, as it was some way off; but the day before yesterday (March 24) I was out and heard a hedge-sparrow sing in a bush quite close. It was half-past eleven and a dark stormy night. Have you heard of a similar case?

The Cottage, Batheaston, near Bath. N. C. VAISEY.
March 26, 1905.

235. Thrush.—In a plantation near here a thrush has been found sitting on five eggs on the bare ground. There was no nest of any kind, which is most unusual. The bird unfortunately has not succeeded in raising a brood.

EDMUND THOS. DAUBENY.

236. Ringed Plover.—These birds occur sparingly throughout this district, and two or three pairs make their home in a large field close here. This year the field has been given over to the rearing of poultry, and these ringed plovers, which are only too tame, are constantly to be seen close to where the fowls are fed. About the middle of March I was told that one of the cocks was to be shot, as it was such a "strange and pretty bird"! I pleaded for its life successfully. At the end of March a nest was found and the eggs were boiled and eaten. The unfortunate birds contemplate laying again, and a promise has been given me that the eggs will not be taken a second time. Rustics often take home and boil small birds' eggs, even those of thrushes and blackbirds, a hateful habit which is hard to stop, and causes the lover of wild creatures an extra pang at the persecuting ways of man's omnivorous stomach.

EDMUND THOS. DAUBENY.

237. Chameleons Born at Sea.—I saw on Saturday, at Mr. R. Green's Conservatories, Covent Garden Market, what I think must be a very rare and unusual thing. In a box containing some chameleons received that morning from South Africa, were also some young ones about 1 to 1¼ inches long, which must have been born on the journey. The old ones are of normal colour except one, which is of a very bright green, with a broad stripe of brown running down each side. The young ones were also of the usual colour, again except in the case of one of them, which is of a pale flesh colour, and the young ones were clinging to the old ones and being carried about by them.

Being so small and young, I fear it will be difficult to feed them properly, but thought it might interest your readers, and so send you these few particulars.

"GRASSHOPPER."

238. Apple-Blossom Weevil.—Early this year my pear trees were covered with flower-buds. Towards the end of March, however, the ravages of an enemy declared themselves, and the chances of a crop are gone. At least 95 per cent. of the buds have been hollowed out by the larva of the Apple-Blossom Weevil (*Anthronomus pomorum*) and are hopelessly ruined. The female beetle bores a hole in the side of the unopened bud, deposits an egg, closes up the hole, and moves on to another which she treats in like manner till she has laid from thirty to forty eggs. During the year there are several generations; and I fear the attack will spread to the apple trees.

In reading the history of this tiny pest, which preys upon our orchards more or less every year, we come across suggestions for combating its attacks, which look very well on paper; but in most cases are unpractical. The difficulty is to discover the infestation in time; and many of the remedies suggested are impossible to carry out on anything like a large scale. Tits are untiring enemies of this insect in its different stages, and should be encouraged in our gardens and orchards. EDMUND THOS. DAUBENY.

NATURAL HISTORY QUERIES.

49. Rooks.—A rooks' nest was built in a tree in a town garden about one hundred yards away from another large garden where had been a small rookery for about thirty years. All the summer there were *three* rooks in the tree: the hen sitting on the nest and two attendant birds—one sitting on a twig close by, and another a little further off. When the second of these went away the third usually went with it.

Query—What was the business of the third bird, and what was its sex?

50.—Robins Fighting.—For the last three years I have had a very tame robin coming into the house every day, and it even fed out of my hand. As it never sang, I concluded it was a hen. Lately another robin has come every day for food: it is not so tame, but sings beautifully.

On March 26 the tame robin came hopping slowly through the window with one eye completely pecked out, and her beak twisted quite crooked like a pair of scissors. I got her into a cage, where she now is. She soon learnt to feed herself in spite of the damaged beak, and seems more likely to die of over-eating than anything else. She is obliged to eat large pieces as she cannot pick up small ones.

Every day the other robin comes through the open window and perches on the cage, singing. The robin in the cage takes no notice at all.

Is it true that young robins kill the old ones? If so, I thought that only applied to cocks, and my injured bird is evidently a hen.

I should be pleased if any of your correspondents would enlighten me.

Botley, Hants. M. S. JENKYNS.
April 7, 1905.

51. Joint Nesting.—On the subject of joint nesting, I should much like to know whether there is any explanation, or whether it is only an accidental occurrence. Last April I found a moorhen's nest with seven moorhen's eggs in it and one coot's. CUTHBERT RAIKES.

SELBORNE SOCIETY NOTICES.

[NOTE.—ALL ANNOUNCEMENTS WITH REGARD TO MEETINGS OF THE CENTRAL SOCIETY OR BRANCHES WILL BE FOUND TOGETHER AT THE END OF THESE NOTICES.]

New Members.—*Central Society.*—John F. Davie, Esq., Oxford Circus; William Lawrence, Esq., Hanwell; Miss Dunham Massey, Croydon.

Birmingham Branch.—Miss Thring, Edgbaston.

Clapton Branch.—Miss E. Hawker, Dalston Lane.

Hampstead Branch.—E. E. Betyemann, Esq., Parliament Hill; E. Collins, Esq., Mrs. E. Collins, Chiswick; Miss Ethel Stanbrook, Tufnell Park; Miss Steinberg, Miss Alice Steinberg, South Hampstead.

Subscriptions.—The Council has great pleasure in acknowledging subscriptions of greater value than 5s. from the following members: G. A. Musgrave, Esq., £1 1s.; Mrs. Musgrave, £1 1s.; Lady Simeon, 10s.

Library.—The Honorary Librarian has pleasure in acknowledging the following additions to the Library: "The Glamour of the Earth," by G. A. B. Dewar; and "Verses Chiefly About Nature," by G. E. M., kindly presented by the Editor; and five editions of the "Natural History of Selborne," by Gilbert White, kindly presented by E. A. Nash, Esq.

The Honorary Librarian will attend at 20, Hanover Square, from 6 p.m. to 6.30 p.m., on the evenings when the Publications Committee meets (at the present on the second Monday in the month), for the purpose of issuing books to Members.

SELBORNE SATURDAY AFTERNOONS.

March 25.—About seventy Members assembled at Tallow-Chandlers' Hall, Dowgate Hill, where they were welcomed by Mr. M. F. Monier-Williams,

Clerk to the Company, who kindly acted as guide. In a paper prepared specially for the occasion, Mr. Monier-Williams traced the Company's history from early times. The Guild was originally a combination either for trade or religion, but for which is not known. In 1426 it was authorised by Henry VI. to search for and destroy all bad and adulterated oils, and from Elizabeth were obtained further supervisory powers, which led to Star Chamber proceedings against two offenders. Again, in 1709, the Chandlers destroyed someone's defective candles, but for this they were mulcted in damages by the Court of Queen's Bench, and that seems to have been the Company's last attempt to exercise such powers.

In muniments, records, &c., the Company is particularly rich. These were preserved from the Great Fire by the Master, who took them in his coach to his house at Hampstead or Highgate. In 1456 there was a Grant of Arms, an exceedingly fine specimen of heraldic work. In 1602 there was a Grant of Supporters, though here there is a palpable decline in artistic merit. The Charter of Incorporation granted in 1462 was shown to the visitors, as well as the Yeomanry account book of 1518, a record of unique interest and good caligraphy.

Among the Company's benefactors was one Stephen Little, baker, who left it two houses at Bankside, Southwark, near the Globe Playhouse, licensed in 1603 to Fletcher, Shakespeare and Burbage. This Southwark property is still in the Company's possession.

The Hall was built in 1672, at a cost of £2,720, and remains essentially in its original condition. It is a very fine chamber. Fine, too, is the Court Dining-room, containing good carving and wainscoted in 1675. The oak staircase could not fail to attract notice. Though modern, it is particularly handsome, and is evidence of the work that can still be done if entrusted to a capable designer.

The Company dispensed hospitality and the Selbornians' sense of indebtedness found expression in a hearty vote of thanks, submitted by Mr. H. Plowman, F.S.A., and seconded by Mr. R. Marshman Wattson.

Near by, in College Street, is the home of the Innholders' Company, which was next visited. Here Mr. J. Douglass Mathews, F.R.I.B.A., F.S.I., acted as guide, and read a paper which proved very acceptable to his audience. In 1327 there was something of a fiscal controversy, for the Hostelers and Haymongers complained to the Mayor and Aldermen of trade facilities given to outsiders. This may have resulted in a monopoly, because about forty years later restrictions had to be imposed on the Hostelers and Herbergeours, on account of their excessive charges. Accordingly in 1371, the statutory price for feeding one horse a day and a night was fixed at 2½d.; for a gallon of best ale 2d.; and for a bushel of oats 8d., as a maximum. From 1473 the allied traders were known as Innholders, and to them a Charter of Incorporation was granted by Henry VIII. in 1514. This muniment has been preserved, and is a most interesting specimen of work. The usual mutations ensued in the reigns of Charles II. and James. The first-named monarch compelled, under pain of fine, all keepers of inns, hostleries, or livery stables in the City and Liberties, or within three miles of same, to join the Innholders' Company; and the other monarch modified what his brother had done, while William and Mary restored to the Corporation and City Companies all their former privileges.

For the present buildings Mr. Douglass Mathews is more or less responsible. In a truly conservative spirit has he rebuilt or restored them, and against him there cannot be raised the finger of reproach generally levelled against so-called restorers. The Hall was built just after the Great Fire, at a cost of about £1,200, and though it and the other premises were repaired from time to time, yet about twenty years ago they were all so dilapidated that to Mr. Mathews was confided the difficult task of saving what he could. With the Hall he has been entirely successful, and it charmingly preserves the old-fashioned appearance of two hundred years ago. As regards the remaining rooms there was nothing for it but to rebuild them. Inevitable change there has been, but it is not obtrusive.

The Innholders are singularly rich in ancient plate, and to a full description of this Mr. Upper Warden Gibbs did full justice, piece by piece. Tea followed, and the very enjoyable proceedings terminated with a suitable acknowledgement

to the Company and to Messrs. Mathews and Gibbs, upon the motion of Messrs. Thomas Greenhill and G. H. Cottam.

April 8.—In weather which has been quite exceptional for warmth and brightness of late, a large party mustered at Kew for the last meeting of the series. To illustrate the dependence of plant-life upon moisture and protection from frost, as well as upon the temperature, Professor Boulger conducted the Members in succession through the Tropical Aroid House, the Succulent House, the Alpine House, the Rock Garden and the T-Range, in which attention was mainly directed to the orchids, pitcher-plants and insectivorous plants. Some of the achievements of the artificial selection of the plant-breeder in Primulas, Cyclamens and Cinerarias were also pointed out in the Conservatory. A misunderstanding as to tea and the T-Range then temporarily divided the party, some of whom followed their leader to Miss North's Picture-Gallery and examined that remarkable series of representations of tropical vegetation ; and, after tea, a visit was paid to the Temperate House, which is largely devoted to the plants of Australia.

NEWS FROM THE BRANCHES.

Birmingham and Midland.—On Thursday, March 30, Mr. Reginald Hudson kindly repeated his interesting lecture (recently delivered in Edgbaston), entitled "Some Warwickshire Birds," to a large audience at Blackwell, near Bromsgrove. The use of "The Shelter" was granted by the kind permission of Mr. and Mrs. Barrow Cadbury. Mr. Thos. Barclay, at whose request the lecture was delivered, presided, and also arranged for the lantern and a very efficient lanternist, to exhibit the beautiful series of slides, by which the lecture was illustrated. Four of the village lads acted as stewards, and the hearty applause at the close of the lecture showed how much it had been appreciated.

Mr. Richard Kearton, F.Z.S., gave a very interesting lecture on "Nature at Work and at Play" on Thursday, April 6, in the Midland Institute. Upwards of seven hundred children from some of the primary schools were present, fifty from the Crippled Children's Union, and others from various institutions in the City. These, with members of the Branch, entirely filled the large Lecture Theatre. Mr. Raybould kindly played a selection of suitable music on the organ as the children were shown into their seats by a band of voluntary stewards. The lecture was illustrated by a beautiful set of lantern slides : Mr. J. Humphreys presided, and the lecturer was warmly applauded at the close.

Hampstead. *March* 22.—The last lecture of the session was given on this date by Mr. Macdonald Brown, M.D., F.R.C.S., F.R.S.E., who took for his subject, "Our Unseen Foes and How to Fight Them." The lecturer gave graphic descriptions of the various forms of bacteria surrounding us, some hostile and some friendly, but all virile and existent practically everywhere.

Dr. Brown dwelt on the enormous importance of good hygiene, pure air and water, in the fight between health on the one hand and bacteria on the other. In conclusion he alluded to the wonderful little bodies in the blood called phagocytes, and showed the importance of their life-work in constantly combating and overcoming the fierce attacks upon the body by hostile bacteria. Not the least attractive part of the lecture was Dr. Brown's dexterous way of giving form to his remarks by numerous blackboard illustrations. On the motion of Mr. F. C. Channing, seconded by Mr. H. Wilkins, cordial thanks were voted to Dr. Brown for his very able address.

The Committee of the (Hampstead) Branch has pleasure in acknowledging subscriptions of greater value than 5s. from the following: C. D. Davis, Esq., 10s. 6d. ; Mrs. C. D. Davis, 10s. 6d.

Seaford (Junior).—A meeting was held on April 1, when a full muster of Associates listened to an address by Mr. Hubert Poole, on "Primroses and Cowslips," and "Migration of Swallows."

FORTHCOMING EVENTS.

Central Society.

Business Meetings.—The next meeting of the Council will be held on Tuesday, May 23, at 5.30 p.m., and the Publications Committee will meet on Monday, May 8, at 5.30 p.m.

Annual Meeting and Conversazione.—The Annual Meeting and Conversazione will be held in the Theatre and Halls of the Civil Service Commission (old London University buildings), Burlington Gardens, New Bond Street, W., on Wednesday, May 3, 1905, from 7.30 to 11 p.m. The Right Hon. Lord Avebury, D.C.L., F.R.S., will preside. All full Members are entitled to one non-transferable ticket, and to purchase others for their friends at a nominal price (one shilling). Members of the Central Society will receive their tickets by post without application, but must obtain guests' tickets from the Hon. General Secretary (Wilfrid Mark Webb, 20, Hanover Square). Branch Members and Associates must apply to their local Hon. Secretaries for all tickets. Associates and Adherents will receive tickets upon payment of one shilling, and they will be granted tickets for their friends at the same price.

N.B.—No guests' tickets will be issued unless a remittance be sent, and under no circumstances will they be available unless signed by a Member, Associate, or Adherent.

Field Club Rambles.

Saturday, May 6.—Rickmansworth. Walk through Moor Park to Batchworth Heath. Tea at "Ye Olde Greene Manne," 5.15 (9d. each). Returning by field-paths to Northwood. Baker Street (Metropolitan), 2.15; Swiss Cottage, 2.18; Finchley Road, 2.20. Special return tickets (Rickmansworth) for 1s. 7d. can be obtained at *Baker Street Station only*. Guides, Messrs. C. M. Hailes and Geo. Avenell.

Saturday, May 13.—Ramble round Wood Bickley, &c. Book (single) to Bickley. Holborn Viaduct, 2.37; St. Paul's, 2.39; Victoria, 2.40 (L.C.D.R.). Walk through Roundabout and Petts Wood. Tea at Chislehurst Common (Taverna, Baker) after ramble. Return from Bickley or Chislehurst. Frequent trains. Guide, Mr. C. M. Mühlberg.

Saturday, May 20.—Valley of the Mole. Meet at Leatherhead Station on arrival of train leaving London Bridge (L.B.S.C.R.) at 2 p.m. Take cheap return tickets, 2s. Tea at Mickleham (1s. 6d.). Should time permit a ramble will be taken after tea over Ranwood Common to Box Hill Station. Guide, Mr. A. B. Wilkinson.

Saturday, May 27.—Potter's Bar. South and North Mimms. Tea at the "Old Maypole" Inn, North Mimms. King's Cross (G.N.R.), 2.30; Finsbury Park, 2.36. Return tickets (Potter's Bar), from King's Cross, 1s. 9d.; Finsbury Park, 1s. 5d. Guide, Mr. Ernest A. Nash.

Saturday, June 3.—Chenies District. *Book to Chalfont Road.* Baker Street (Metropolitan), 2.20; Swiss Cottage, 2.18; Finchley Road, 2.20. Special cheap tickets, 2s. return, obtainable at Baker Street Station only. Guide, Mr. James E. Whiting.

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1. All communications for NATURE NOTES must be authenticated with name and address, not necessarily for publication.

2. The return of an unaccepted contribution can only be guaranteed when it is accompanied by a stamped and addressed envelope. We cannot undertake to name specimens privately, to return them, or to reply to questions by letter.

3. All communications for any number must be in the Editor's hands by the 10th of the preceding month.

4. Communications for NATURE NOTES, books for review, specimens for naming, &c., should be addressed to the Editor, PROFESSOR BOULGER, F.L.S., F.G.S., 11, Onslow Road, Richmond, Surrey.

5. For the supply of the Magazine to others than members, or for back numbers (except in the case of new members), address the publishers, with stamps at the rate of 2½d. per number, Messrs. JOHN BALE, SONS AND DANIELSSON, Ltd., 83-91, Great Titchfield Street, London, W.

6. Letters connected with the business of the Society, subscriptions, and applications for membership, should be sent to the local Honorary Secretary, or to the Honorary General Secretary of the Society, WILFRED MARK WEBB, F.L.S., at 20, Hanover Square, London, W.

BOOKS IN THE LIBRARY OF THE SELBORNE SOCIETY.

(*Continued from p.* 80.)

White, Gilbert. Natural History of Selborne. (Edited by Sir William Jardine.) (1853)
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Nature Notes:

The Selborne Society's Magazine.

No. 186. JUNE, 1905. Vol. XVI.

THE ANNUAL MEETING AND CONVERSAZIONE.

MORE than 500 members and their friends were present at the Annual Meeting and Conversazione, on May 3, and formed, as Lord Avebury pointed out, the largest audience which has yet assembled to hear his annual address. Once more, owing to the kindness of His Majesty's Office of Works and the Civil Service Commissioners, the meeting was held at the offices of the Civil Service Commission, Burlington Gardens, New Bond Street, and among those present were Lord Avebury and the Hon. Miss Lubbock, General Sir Luther Vaughan, K.C.B., and Lady Vaughan, Sir John Cockburn, K.C.M.G., and Lady Cockburn, Sir James Crichton-Browne, Sir John Goldney, the Countess von Arnim, Mr. George Avenell, Mr. and Mrs. E. Bidwell, the Rev. R. Ashington Bullen, B.A., F.L.S., F.G.S. (Honorary Secretary of the South-Eastern Union of Scientific Societies), Professor Boulger, F.L.S., F.G.S. (Editor of Nature Notes), Mr. R. H. Burne, B.A. (Honorary Secretary of the Malacological Society), Mr. R. Miller Christy, F.L.S. (President of the Essex Field Club), Mr. and Mrs. Alfred T. Craig, Mr. Shaw Crompton, R.I., Mrs. Crompton, Mr. J. F. Davie, Mr. C. M. Hailes (Chairman of the Conversazione Committee) and Mrs. Hailes, Mr. John Hopkinson, F.L.S. (Honorary Secretary of the Ray Society), and Mrs. Hopkinson, the Rev. H. N. Hutchinson, M.A., F.G.S., Mrs. Hutchinson, Dr. Jonathan Hutchinson, F.R.S., Miss Hutchinson, Mr. S. W. Kershaw, F.S.A., Mrs. Percy Myles (Vice-President), Mr. Mühlberg, Mr. George Nicholson, F.L.S., Dr. Josiah Oldfield, Mr. W. H. Palmer, Mr. and Mrs. Oscar Parker, Professor and Mrs. Flinders Petrie, Mr. H. Plowman, F.S.A., Mr. Hubert Poole (Honorary Librarian), Mr. R. Garraway Rice, F.S.A., Mr. F. W. Rudler, I.S.O., F.G.S., Dr. Dukinfield Scott, F.R.S. (Secretary L. S.), Mrs. Dukinfield Scott, Mr. and Mrs Edward Step, Miss Kate Stevens, Mr. and Mrs. R. Marsh-

man Wattson, Mr. Wilfred Mark Webb, F.L.S. (Honorary Secretary), and Mrs. Wilfred Mark Webb.

Letters of regret were received from the Archbishop of Canterbury, the Duke of Norfolk, the Duke of Argyle, the Earl of Stamford, Lord Strathcona, Sir William Huggins, Mr. Jesse Collings, and the Rev. Canon Horsley.

The evening, from first to last, was a perfect success, and the thanks of the Society are due to all those who ungrudgingly contributed towards it.

At the business meeting, held in the large Hall, Mr. Mühlberg occupied the Chair. The President, Vice-Presidents and Council for the year 1905-1906 were elected, on the proposition of Mr. John Hopkinson, seconded by Mr. Ashington Bullen, and the following is a list of the Council and officers, as they now stand :—

President.

THE RIGHT HON. LORD AVEBURY, D.C.L., F.R.S.

Trustees.

THE RIGHT HON. LORD AVEBURY, D.C.L., F.R.S.
G. A. MUSGRAVE, ESQ., F.Z.S., F.R.G.S.

Vice-Presidents.

O. V. Aplin, F.L.S.
George Avenell.
Prof. G. S. Boulger, F.L.S., F.G.S.
The Hon. Mrs. R. C. Boyle.
Mrs. Brightwen, F.Z.S., F.E.S.
The Right Hon. James Bryce, M.P.
The Rev. H. E. U. Bull, M.A.
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Dudley W. Buxton, M.D., D.Sc., M.R.C.P.
His Grace the Archbishop of Canterbury.
The Hon. Sir John Cockburn, K.C.M.G., M.D.
Alfred T. Craig.
Fred Enock, F.L.S., F.R.M.S.
The Right Hon. Sir Mountstuart E. Grant-Duff, G.C.S.I., F.R.S.
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Mrs. Martelli.
Mrs. Charles Mathews.
William Henry Maw, M.I.C.E., P.R.A.S., F.R.M.S.
The Hon. J. Scott Montagu, M.P.
G. M. Murray, F.R.S., F.L.S.
G. A. Musgrave, F.Z.S., F.R.G.S. (*Founder*).
Mrs. G. A. Musgrave (*Founder*).
Mrs. Percy Myles.
J. L. Otter.
Earl Percy, M.P.
Mrs. E. Phillips.
The Rev. Canon H. D. Rawnsley, M.A.
The Hon. Lionel Walter Rothschild, Ph.D., M.P.
R. Bowdler Sharpe, LL.D., F.L.S.
The Right Hon. The Earl of Selborne.
The Right Hon. The Earl of Stamford.
R. Marshman Wattson.
W. Whitaker, B.A., F.R.S., F.G.S.

Council.

Six Vice-Presidents nominated under Rule VIII.

The Rev. H. E. U. Bull, M.A.
Dudley W. Buxton, M.D., D.Sc., M.R.C.P.
A. Holte Macpherson, M.A. B.C.L., F.Z.S.
Mrs. Percy Myles.
R. Marshman Wattson.
W. Whitaker, B.A., F.R.S., F.G.S.

Twelve Councillors.

George Rowland Blades, F.R.G.S.
The Rev. R. Ashington Bullen, B.A., F.L.S.
J. Shaw-Crompton, R.I.
F. Downing, F.I.S.
C. M. Hailes.
Matthew Davenport Hill, M.A. F.Z.S.
C. M. Mühlberg.
Oliver Pike, F.Z.S.
H. Plowman, F.S.A.
W. P. Pycraft, A.L.S., F.Z.S.
Mrs. Douglas Wilson.
A. B. Wilkinson.

Hon. Treasurer—J. L. Otter. *Editor*—Prof. Boulger, F.L.S., F.G.S.

Hon. Librarian—Hubert Poole.

Hon. Secretary—Wilfred Mark Webb, F.L.S.

Mr. Mühlberg afterwards proposed the adoption of the Nineteenth Annual Report and Financial Statement from the Chair. These were unanimously passed, and will appear in full in the next number of Nature Notes.

This meeting was brought to a close with a vote of thanks to the Chairman.

The first lecture of the evening was given in the Theatre by Mr. Fred Enock, F.L.S., the title being "An Old London Elder-tree." The address was fully illustrated by means of moving lantern-slides, and in it Mr. Enock dealt with his own observations on several kinds of wasps which bore into the wood of the elder, make their nests, lay their eggs, and store up a supply of different insects for their larvæ to feed upon.

At 8.30 p.m. Lord Avebury took the chair, and after making some very pleasant and amusing remarks, delivered the following address on "The Love of Nature":—

"In the romances of the Middle Ages we read of knights who loved and were loved by Nature-spirits—of Sir Launfal and the Fairy Tryamour, who furnished him with many good things, including protection from the main dangers of life, and a magic purse, in which—

> "As oft as thou puttest thy hand therein
> A mark of gold thou shalt winne."

Such times have passed away, but better ones have come.

"It is not now merely the few who are so favoured. Nature showers blessings on all who love her. The magic purse was indeed a work of the imagination, or at any rate it is a thing of the past. The gifts of Nature do not consist of what are very erroneously called the 'good things' of this world—but of the

best things, making life full of interest—giving peace of mind health of body, and innocence of heart. Moreover, if she brings little dowry, she saves great expenses—especially some which are among the most annoying—lawyers' bills and doctors' bills, for instance.

"There has recently been an animated discussion in the newspapers as to whether Greek should be a compulsory subject in university examinations—which is euphemistically termed 'maintaining the Greek basis of education against the material tendencies of the present day.' It is not we who wish to pit Greek Grammar against Nature-Study. Greek—even a little Greek—is very useful. But nothing was said about Science being a compulsory subject—which, alike from a practical and from an educational point of view, is even more important. Education without Science is incomplete and one-sided, and the greatest Classical scholar, if he know nothing of the world we live in, is but a half-educated man after all.

"To all those who love the country and appreciate the beauties of Nature, it is very pleasant to watch the growing demand for popular and elementary books on country life. The present tendency to flock into towns and cities is regrettable, both from the point of view of the character and health of our people; and it is a constant surprise to the naturalist that any one in his senses should prefer the smoke, turmoil and noise of the streets by day, and the flare of gaslight, and still worse, of arc lights, by night, to the peace and pure air, the sunshine by day, and no less beautiful moonlight by night, which we may enjoy in the country. In towns there are theatres and music halls, but the country has the murmur of water, the ripple of the sea, and the music of the birds. Cities, no doubt, have museums, though it will hardly be alleged that to our rural population they are any attraction. Moreover, while museums are absolutely necessary for the study of science, and to those who can appreciate them, add much to the interest of existence, still every field and wood, every pond and lake, every river and seashore is itself a museum —not of skeletons and stuffed animals—but of living and, let us hope, of happy creatures.

"One way of bringing our people back to the soil, and carrying even those who live in the cities to the woods and fields whenever they have a holiday, is by bringing home to our countrymen and countrywomen—firstly, the beauty and interest of even our commonest animals and plants; and secondly, that it is much more interesting to watch than to kill them.

"The study of Nature is indeed as inexhaustible as it is interesting. There is not a single animal or plant the whole life-history of which is yet known to us; nor one which would not pay, repay, and over pay, I will not say merely the study of an hour, but the devotion of a lifetime. I do not say that observation is easy. The typical Nature-spirit—the dainty, delicate and delightful Ariel, was, we know, a tricksy spirit.

He not only tricked Caliban, but even philosophers have fallen victims. It is easier to overlook than to look. Indeed, so much is this the case, that, in ordinary language, 'to overlook' does not mean to see, but not to see. Moreover, observation requires great care. Nature is kindly, but full of humour.

"As regards the work of the Society during the past year, full particulars are given in the Report, and unfortunately, also clear evidence how necessary the work of the Society is. The so-called 'ospreys,' for instance, continue to be worn, in spite of all the evidence of the barbarity they involve. They have been discarded in the Army, thanks to Lord Wolseley; but, though our officers shrunk from the cruelty of wearing them, ladies continue to do so! One would have thought that the fact that every 'osprey' involves the starvation of several young would have appealed to them. I would suggest that every one seeing a lady wearing one of these worse than barbaric appendages—for I cannot call it an ornament—should send the name to our Council, if they on their part would send one of our leaflets to the delinquent, for this is one of the cases where cruelty is the result of ignorance—in most, at least, it is want of thought more than want of heart.

"Professor Boulger continues, I am glad to say, to edit NATURE NOTES, and we are much indebted to him for doing so. Mr. Wattson has found it necessary to resign the Secretaryship, which he held for four years to the great advantage of the Society. The Council have been fortunate in inducing Mr. Wilfred Mark Webb to undertake the post. Under his energetic management we may feel every confidence that the prosperity and usefulness of the Society will be maintained."

In proposing a vote of thanks to Lord Avebury, Sir James Crichton-Browne alluded to the work of the Society as an important branch of mental hygiene. If there was more communion with Nature there would be, perhaps, less nervous disease in these days. Man does not live by bread alone, nor can he nourish his spirit exclusively on bricks and mortar. Sir William Huggins has said truly, at the banquet of the Royal Academy, that "life is not measured by passages of the suns, but by the sum of our activities, not by the falling sands in the hour-glass, but by the stirring of our minds within." Printing, steam, gas, electricity, radium, petrol, and the thousand modern applications of machinery, crowd into one year of our lives as many impressions and experiences, as much agitation as would have sufficed our great-grandfathers for half a century. This high pressure and over-crowded existence, this hurry-scurry and incessant struggle, involve the strain and wear and tear of the higher nerve centres, which are apt to give way, unless they are recuperated from time to time; and there is no kind of recuperation better, or more restorative, than that which is

to be found in the genial influences that the Selborne Society strives to preserve and diffuse.

If, he continued, we want our town-bred children to grow up hale and lusty and right-minded, able to resist some of the morbid influences that will assail them in their career, we must secure to them ampler, freer, more intimate intercourse with Nature than they now enjoy. It is in early years that the true taste for Nature, the genuine enjoyment of her beauties and wonders, can be best created. The sense of beauty is vision raised to a higher power, and that enlargement of vision can, I believe, be best effected in early years by the study of Nature, in later years by the study of art. The child cut off from Nature is apt to grow up dead to much of the loveliness that lies around, insensible, perhaps, to higher and more precious intimations. Carlyle said that every wayside flower is an eye looking out of an infinite inner ocean of beauty, and it seems to me that by gazing in these floral eyes we may obtain glimpses of that ocean and of sublime realities that might otherwise remain hidden from us. But to read the flowers aright we must reverently study them. The eyes of a stranger have no message for us, but how full of meaning are the eyes we have learned to love, and so the flowers that are dumb to a passing glance may speak volumes to a tender contemplation.

Sir John Cockburn seconded the motion, and said that Lord Avebury was rightly regarded as the High Priest of Nature and chief interpreter of her mysteries. Nature-study added a precious seeing to the eye and might almost be said to have given sight to the blind. It exercised a marvellous assuaging power over the sorrows of life, and this was well expressed by the poet Bryant:—

> "To him who in the love of Nature holds
> Communion with her visible forms, she speaks
> A various language; for his gayer hours
> She has a voice of gladness, and a smile
> And eloquence of beauty; and she glides
> Into his darker musings, with a mild
> And healing sympathy, that steals away
> Their sharpness, ere he is aware."

The attitude of the lover of Nature, Sir John Cockburn continued, was not precisely that of the man of science. It was as much or more an affair of the heart than of the brain. The naturalist loved life and had little sympathy with *post-mortem* investigation. Above all, he viewed Nature as a whole without dissecting out any part. Half the charm was lost in separating an object from its surroundings. Emerson, in "Each and All," wrote:—

> "All are needed by each one,
> Nothing is fair or good alone.
> I thought the sparrow's note from heaven,
> Singing at dawn on the alder bough;
> I brought him home in his nest at even;
> He sings the song, but it cheers not now,
> For I did not bring home the river and sky;—
> He sang to my ear,—they sang to my eye."

The desire of the city-dwellers for Nature's beauty was enhanced by their separation. Multitudes who escaped from prison on Saint Lubbock's day owed a deep debt of gratitude to their Patron Saint.

Sir John then put the resolution, which was carried with acclamation, and Lord Avebury briefly replied.

The Honorary Secretary, Mr. Wilfred Mark Webb, proposed a hearty vote of thanks to the Civil Service Commissioners and His Majesty's Office of Works, for their kindness in allowing the Society to meet in Burlington Gardens. This was seconded by Professor Boulger and carried unanimously.

Mrs. Dukinfield Scott then showed a series of photographs of plants taken at short intervals, but projected on to the screen by the aid of the kammatograph in rapid succession. By this means the flowers of *Crocus*, *Sparmannia*, *Fuchsia*, *Clivea*, &c., were made, as it were, to open before the eyes of the audience, and naturally the exhibition excited considerable interest.

Mr. Jonathan Hutchinson, F.R.S., afterward took the chair, so that Lord Avebury might have an opportunity of examining the microscopes and other exhibits; and Mr. Oliver G. Pike then gave a short lecture on "Some Birdland Comedies," and delighted the audience as usual with his beautiful photographs, which were thrown upon the screen in illustration of his remarks. He was followed by Mr. Percival Westell, who, under the title of "A Feathered Philistine Caught in the Act," gave an account of the habits and behaviour of the young cuckoo in other birds' nests. With Mr. Westell's address the proceedings in the Theatre were brought to a close.

The South-west Hall was practically devoted to an exhibition of microscopes. Objects were shown under them by Fellows of the Royal Microscopical Society, members of the Quekett Club, and others, of whom the following is a list: Messrs. Henry Austin, Franklin T. Barratt, Thomas N. Cox, H. E. Freeman, E. C. Goulton, Ernest Hinton, the Rev. H. N. Hutchinson, M.A., Messrs. Richard R. T. Lewis, F.R.M.S., E. Leonard, B. T. Lowne, R. Marks, F.R.M.S., J. Marshall, F.R.M.S., Herbert S. Martin, J. Milton Offord, F.R.M.S., W. C. Smith, C. D. Soar, F.R.M.S., A. W. Stokes, H. Tavener, F.R.M.S., Charles Turner, Wattson and Sons, Charles West, and C. H. E. West.

Of the general exhibits, those should be mentioned first which are connected directly or indirectly with Gilbert White. By the courtesy of Mr. Walter Daniel, two letters written by Gilbert White to his brother, the Rev. John White, were shown. Mr. Daniel also exhibited a proof of the frontispiece of the first edition of the "Natural History of Selborne" "before letters" and unfolded.

Mr. E. Bidwell took the trouble to illustrate Gilbert White's letter to Pennant with a series of rush-lights, rush-holders and a tinder-box from his celebrated collection.

Mr. F. W. Rudler, I.S.O., F.G.S., contributed a series of Selbornian fossils, in connection with which the following explanation may be given. The name Selbornian, taken from Gilbert White's village, has been introduced by the Geological Survey as a stratigraphical term to include the Gault and Upper Greensand. These strata may be regarded as representing different phases of the Selbornian group or base of the Upper Cretaceous series. The term Selbornian was first made use of by Mr. A. J. Jukes-Browne in vol. i. of his memoir on "The Cretaceous Rocks of Britain," 1900.

There was a very large series of specimens, photographs and other representations of Natural History and archæological specimens, as well as a few of meteorological and physical interest.

On the botanical side must be mentioned a collection of gourds, in connection with the growing of which Mrs. Brightwen, F.Z.S., F.E.S., who exhibited it, is now justly famous. Professor Boulger, F.L.S., covered several tables with museum specimens and photo-micrographs of woods. The exhibit of Mr. Jonathan Hutchinson, F.R.S., took the shape of water-colour drawings illustrating the malformations which fungi cause in plants. Mr. Lowne brought some living specimens of bog plants, and among the interesting specimens shown by Miss Whitmore, were some curious seeds. Among other exhibits of a botanical nature were the albums of studies by Mr. Stanley C. Bailey, photographs of flowering plants and fungi by Mr. Edward Step, F.L.S., and water-colour drawings of East Kent flowers by Miss Roget.

One or two of the exhibits were quite as much zoological as botanical. Mr. Henry Stevens' photographs, the detail in which is unrivalled, included studies of flowers and pictures of happy families of the kind which has made his name as an amateur photographer. In Mr. Henry Irving's exhibit were large photographs of trees in summer and winter dress, side by side with animals at the Zoo, and a series showing the development of the horns of the Wapiti, which is an object-lesson on continued observation to all Nature photographers. Among the zoological photographs were some birds, including a peacock, cleverly caught with his train expanded, by Miss Turner. There were also a number of birds and beasts taken by R. B. Lodge and Douglas English, and exhibited by Mr. R. S. H. Leeder, as well as prints of the cuckoo photographs by Mr. J. Peat Millar which Mr. Westell showed as slides in his lecture. Photo-micrographs of a caterpillar developing within the egg, and taken at very frequent intervals, were lent by Mr. W. H. Hammond.

Mr. John Hopkinson, F.L.S., showed an interesting series of coloured plates which will embellish future volumes to be published by the Ray Society, the chief object of which, as is well known, is to produce monographs on British Natural History. The Honorary Secretary showed a complete set of plates of the British wood-lice, prepared for a book upon the subject.

The inventor of the Grün liquid lens exhibited coloured slides made with its help; and the Neotint Lantern Slide Company had a general series of lantern pictures of Natural History as well as a set arranged by the Secretary of the Selborne Society for the Children's Country Holidays Fund.

From the Stepney Borough Museam, over which Miss Kate Hall presides, came honey, gathered by "East End" bees, which was without doubt obtained from sugar at the docks. Miss Hall also showed a simple method of aërating an aquarium.

A large series of beautiful and curious shells was brought by Mr. G. B. Sowerby, F.L.S., who described them to the visitors which they attracted, in his usual genial way.

The Rev. Ashington Bullen, B.A., F.L.S., F.G.S., had on view an albino mole, and a striking little collection of the left-handed, high-spired land shells, *Clausiliæ*, which, from the little hinged plate which closes the entrance of the shell when its owner retires within, have sometimes been called "swing-door snails." Mr. E. T. Newton, F.R.S., contributed some cases from his collection of the otoliths or ear-stones of bony fishes, and in this connection the publisher of *Knowledge* sent for distribution a number of copies of that magazine containing an article on the subject.

Some pretty artificial flowers made from shells were brought by Miss Whitmore, and the Secretary exhibited a white stoat from Monmouthshire, interesting on the account of the way in which the winter change of colour had affected to a great extent the tail, which usually in the ermine remains black. The Selborne Society encourages the wearing of feathers of domesticated birds, and a large series of the natural plumage of the ostrich—from wings, body and tail—sent by Messrs. J. Salaman and Co., was most appropriate. Perhaps the largest exhibit of all was that of ivory, due to the courtesy and kindness of Mr. A. van Noorden. This included Mammoth and African elephant tusks, one pair of the latter rivalling the former in size. and weighing no less than 105 pounds apiece. Tusks and teeth of walrus, hippopotamus and whale, were also shown, together with trumpets and pounders of native workmanship, and two finely carved Benin tusks. Two ways also of making a billiard ball were illustrated by actual specimens, and the method in which the waste is used in India for the carving of bangles was exemplified. Mr. van Noorden also contributed some specially beautiful examples of ivory, the milk tusks of the elephant, which alone show signs of any enamel, and a fine horn of the extinct White Rhinoceros. The corridors were adorned with some beautiful rubbings of brasses made by Mr. Miller Christy, F.L.S., and Mr. Tom. E. Sedwick. Some specimens exhibited by the latter were intended to show what could be determined from rubbings of tomb-stones from which the brasses had been torn away.

Mr. J. Shaw Crompton, R.I., hung upon the screens a number of pictures painted in Egypt, together with a series of

photographs taken in that country. Water-colours of London Old World Corners were sent by Mr. V. Alister Macdonald. Mr. H. Plowman, F.S.A., showed objects of archæological interest, and Miss Whitmore brought some flint implements.

Mr. W. Lawrence showed an interesting set of horse-bells, formerly carried by teams in the narrow Wiltshire lanes.

Some specially good photographs of weathered rocks came from Dr. George Abbott. Mr. Ernest Waltham showed snow scenes, and Mr. John Curtis sunshine recorders, deep-sea thermometers, and a meteorograph, which had been lent him by the Royal Meteorological Society, by Mr. James Hicks. Messrs. Wattson and Sons created considerable interest by the exhibition of Strutt's radium clock. A kammatograph, similar to that used in the exhibition by Mrs. Dukinfield Scott, was contributed by Messrs. Kamm and Co. The British Mutoscope Co. lent a Kinora, and the Harper Electric Piano was on view.

The Agricultural Education Committee responded to an invitation to exhibit their Nature-Knowledge Leaflets, and Messrs. Bale, Sons and Danielsson, Ltd., had a table devoted to their Nature publications. Messrs. J. J. Hopkinson, Ltd., kindly lent a grand piano, and an innovation was made by the engagement of a band, Mr. Franz Zeidler's Bijou Orchestra, which played excellently well during the evening. The refreshments in the large Hall, by Messrs. Moon, Field and Co., of Ealing, had many compliments passed upon them.

The Conversazione Committee consisted of Mr. C. M. Hailes (Chairman), Mrs. Percy Myles, Mr. Shaw Compton, with the Editor, Librarian and Secretary. Considerable help was given by Mr. J. F. Davie, Mr. John Hopkinson, Mr. W. Lawrence, and the staff at Burlington Gardens, as well as, on the evening of the Soireé, by Mr. C. M. Mühlberg, Mr. W. H. Palmer, and Mr. R. Marshman Wattson.

SELBORNIANA.

South-Eastern Union of Scientific Societies: Reigate Congress.—It is a very attractive programme which the South-Eastern Union of Scientific Societies has put forward for its ninth annual Congress, which is to be held under the Presidency of Professor Flinders Petrie, at Reigate, on June 7-10, inclusive. A ramble on the North Downs and the President's address on the Wednesday, a business meeting (at which the editor of Nature Notes will present a report on plant-protection), papers on local natural history and antiquities, and a ramble round Reigate on the Thursday; papers on Mendel's law and the law of treasure-trove, a visit to Gatton and an evening reception by the Mayor on the Friday, and two alternative excursions for the Saturday, to the Saxon Church of Worth and Tilgate Forest, or to Mr. Maw's Observatory, at Outwood, make up four crowded days. There will also, as usual, be a temporary

museum under the care of Mr. Swanton, of Haslemere. The General Secretary of the Union, Rev. R. Ashington Bullen, of Pyrford, has just joined the Council of the Selborne Society, whilst our own Honorary Secretary is on that of the Union; and our Members may be reminded that, as our Society is affiliated to the Union they are entitled to attend this Congress, which is this year thus close to London, at the reduced subscription of 2s. 6d., for which they are also entitled to receive the Transactions of the Union.

Insanity in Sussex.—A correspondent invites us to reconsider this heading in the light of letters from the veteran Mr. W. B. Tegetmeier and other fruit-growers, which have appeared in the *Field*. The most detailed of these letters speaks of the publication of the now notorious Bodle Street Club's "bag' as "injudicious" and of the Club's "slaughter" as "culpably indiscriminating," whilst it concludes with the words, "It must be admitted that the rules of such associations generally require amendment, prohibiting the destruction of useful birds." The writer, who exhibits a somewhat defective acquaintance with birds when he accuses a winter visitant like the fieldfare of eating his currants, states that, in his opinion, "rooks do more good than harm," that "the destruction of hawks and other birds of prey by gamekeepers has had a pernicious effect," and that "no one wants to exterminate wild birds other than the house-sparrow." If this be so, we can only continue to consider such indiscrimate slaughter alike of friend and foe as that of which the Bodle Street Club made public boast as insane.

An East End Exhibition.—Mr. Edward Owen Greening, of the Agricultural and Horticultural Society, is co-operating with Canon and Mrs. Barnett in an endeavour to bring before the inhabitants of the East End the opportunities which they possess of beautifying their surroundings. With this end in view an exhibition will be held in July of those kinds of plants which will flourish in the smoky atmosphere of London. Such an exhibition, with adjuncts to show what country people can do with the help of flowers, should prove a great success. The expenses of the Exhibition will, we understand, be met by the Agricultural and Horticultural Association; but Members of the Selborne Society could do much to help in the way of obtaining and making exhibits. Suggestions would be welcomed, and should, in the first place, be sent to the Hon. Secretary of the Selborne Society, at 20, Hanover Square.

Protection for Big Trees.—We are glad to learn that in March last the United States Senate accepted from the State of California the gift of the world-famous Yosemite Valley as an addition to the Yosemite National Park. This means Government protection for the remaining Mammoth Trees, which we commonly call Wellingtonias, though they are known to botanists as *Sequoia gigantea*.

REVIEWS AND EXCHANGES.

Chelsea Window Gardening. By L. M. Forster. Fisher Unwin. Price 2d

That a third edition of Miss Forster's useful little manual has been called for, is in itself evidence of its value. It is issued to assist the work of the Metropolitan Public Garden Association, and we hope many a Londoner will profit by its practical suggestions on such topics as watering, digging, manuring, sowing. pruning, &c. When the fourth edition is prepared some of the names should be revised : generic names with small initial letters seem to the botanist as odd as would human surnames if so written.

The Cultivation of the Common Hare. By the Rev. E. A. Woodruffe-Peacock. South, Goulding and Son. Price 1s.

Naturalists and sportsmen alike will find this an admirable contribution to our knowledge of the life-history of *Lepus timidus.*

The Culture of Sweet Peas. By Richard Dean. Agricultural and Horticultural Association. Price 1d.

This is the third edition of a very useful little handbook by the founder of the National Sweet Pea Society. It brings the best and most reliable advice within the reach of every one interested. The pamphlet forms No. 1 of a series of cheap popular handbooks edited by Edward Owen Greening, F.R.H.S. The Editor adds some notes on recent developments of sweet peas, and the Hon. H. A. Stanhope notes on everlasting peas. There are also some detailed hints on growing sweet peas by William Smith, a practical cultivator of the popular flowers ; and the handbook is illustrated on every page.

Familiar Wild Flowers. Part I. By F. E. Hulme, F.L.S. New Edition. Cassell and Co. Price 6d. net.

This first part of an enlarged re-issue of Professor Hulme's popular work is a striking instance of what the tricolour process can do to cheapen production. It contains the coloured plates and descriptions of eight species not before included in the series, together with a carefully thought-out colour index to the whole work. As all the forty new plates are to be included in the first five fortnightly Parts, those who already have the 280 previously published need only buy these to complete their sets. The publishers are also presenting subscribers to the whole forty numbers with eight cloth cases in which to bind them.

The Essex Naturalist. Vol. XIII., Parts VII., VIII. October, 1904, and January, 1905. Price 5s. each.

These two excellent parts of the Journal of that model Field Club which this year completes the first quarter-century of its existence, contain *inter alia*, a fascinating history of Pyrites and Gypsum, the two leading Essex minerals, by Mr. Rudler, a portrait and biography of George Edwards, the ornithologist, and a paper on the evidences of prehistoric man in West Kent, by Mr. J. Russell Larkby.

Hull Museum Publications, No. 24. *Quarterly Record of Additions.* By Thos. Sheppard. Price 1d.

A dandy-horse of a century ago, a box of old sulphur matches, a Hull spinning-wheel, a problematic metal object which proves to be part of a seventeenth century brass candlestick, some British gold coins and some old Derby china, furnish a goodly store for this interesting quarterly record, the twelfth issued by the indefatigable curator.

Bulletin of the New York Botanical Garden, vol., iii., No. 11, contains papers on the flora of Florida, and of the Bahamas, and on the Cretaceous fossil plants of Long Island, and a lengthy monograph, illustrated with twelve plates, on the embryology of *Cucurbitaceæ.*

The Country Gentlemen's Estate Book, 1905. Edited by W. Broomhall. Country Gentlemen's Association. Price 5s. 6d.

This bulky and handsome volume contains much that will be of interest to every country gentleman, articles on estate law, valuation and accounts, cheap cottages, agricultural education, forestry, fruit-growing and sport, a directory of land agents, and an admirable series of views of noblemen's seats and designs for country houses.

Received: *The Plant World* and *The American Botanist* for March; *Bird-Lore* and *The Victorian Naturalist* for March and April; *The Totnesian* for April; *Our Animal Friends* for April and May; and *The Naturalist*, *The Irish Naturalist*, *Nature-Study*, *The Animals' Friend*, *The Animal World*, *The Humanitarian*, *The Parents' Review*, and *The Agricultural Economist* for May.

NATURAL HISTORY NOTES.

239. Protection of the Otter.—Your correspondent, in Note No. 230, covers a wide range of observation under this head, and it appears to me, in his solicitude for the welfare of the otter, has unduly whitewashed this predatory animal. First of all, I believe that, if the otter is decreasing in its numbers, it is mainly because, apart from any persecution by trapping or hunting, it is one of those extreme recluses that inevitably vanishes in proportion as human dwellings and beings encroach on its haunts. I have never seen a print depicting "the death of an otter by the gun," as referred to by your correspondent, and think in any case that otter-hunting on organised lines accounts for but a small proportion of deaths.

The fact that otters abound where streams are full of fish is surely a sign that the otter goes where the most fish are to be had, rather than that, as Mr. Daubeny implies, the otter is more sinned against than sinning in the matter of the tale of fish that are put to his account. My experience is that the otter is a most wanton hunter and will kill large fish to eat only a very small portion therefrom and leave the rest.

The question of preserving the otter is not, I think, at all on all fours with the protection of wild birds, for the latter are a perpetual pleasure and interest to everyone who sees and hears them and pursues the study of their lives, whereas the otter cannot afford the same scope of universal interest. I question if one per cent. of our Members has ever seen a wild otter in this country.

I do not advocate the persecution of the otter, but I think there are two sides to the question, and it is, I believe, doubtful whether much could be advanced in favour of rigid protection for the otter.

Elm Lodge, Elm Row, HERBERT J. RODGERS.
Hampstead, N.W.
May 14, 1905.

240. Wild Birds Perching on Man.—Anent the above I have been rather interested, because I have had some very curious experiences in this direction. In a volume I published when quite a young man, I pictorially referred to a weasel climbing upon my hoot, while I sought shelter under a bridge during a shower. This was no imaginary instance, but an actual fact, as recorded in "Parish Patches," published by Mr. Thomas Buncle, Arbroath, N.B.

Another time I was seated on a bank-side when a song-thrush came from an overhanging branch and chattered excitedly. I kept perfectly still and quiet, when it rested upon my arm and commenced to sing. Then it left me, and again returned to sing again. Its nest I discovered afterwards within a few yards of the bank side. I have had swallows twice settle upon my rod while fishing, and once while going homewards along the turnpike road a sand-martin tried to alight upon the rod I carried over my shoulder.

While feeding my poultry one morning a cock chaffinch flew into the dish,

and on my remaining stationary it continued feeding until I got tired of holding the vessel, when it hopped on to the ground and then on to my boot.

During a walk through a pine wood one day, a hare came in my direction, and I sat down to note the result. The rodent came on unsuspectingly for a time, stopped and sniffed the air, and came on again. It was between my legs before it realised its position, when it turned and made its way down the lane.

Squirrels are very unsuspecting, as a rule, if there is no stir, and on one occasion one of these actually crawled into a butterfly net I had laid aside while I filled my pipe. Another of the same animals rested upon a plank while I fished, for some ten minutes, and did not move while I walked past it several times.

No end of such instances could be given, but maybe the best illustration of the heading I know of is when a robin perched upon the bald head of the parson in church during service. I could not forbid a smile, which smile was soon upset when the redbreast came my way and settled upon my shoulder, where it remained for a much longer period than seemed comfortable under the circumstances.

Whinhurst, A. NICOL SIMPSON, F.Z.S.
Fordoun, N.B.

241. I was one day waiting behind some alders in order to photograph snipe, when a sedge-warbler alighted on my head, and poured forth his song. It is no uncommon thing for birds to inspect the waiting photographer, or for tiny field-mice to run over one's feet. These are the incidentals that make the hours of watching worth while, even when the results photographically are nothing.

Upper Birchetts, Langton Green, EMMA L. TURNER.
Tunbridge Wells.

242. **Rooks.**—I am interested in your question 49, *re* rooks, having frequently noticed, not only amongst rooks, but amongst other large birds also, this third bird, and wondered whether its position is that of valet, lady's maid, messenger, or rejected swain, or what? As far as my observation serves me, this *odd* bird is the rule rather than the exception.

Hallsannery, Bideford, J. C. LAMB.
May 2, 1905.

234. **Greybirds.**—With reference to the remark on p. 83 of the May number of NATURE NOTES, "Greybirds are, we believe, thrushes," I may say that "greybird" is a common name in Kent and in other parts of England for missel-thrushes, not for the throstle or song-thrush.

Wirksworth. C. E. MEADE WALDO.

244. **Hedge-Sparrow Singing at Night.**—In the May number of NATURE NOTES a correspondent mentions having heard the hedge-sparrow singing at night, and asks if a similar case has been heard of. In my opinion it is quite a common occurrence, having heard the gentle little bird break out into song on several occasions at quite a late hour, having doubtless been disturbed by some passing prowler. Other day-songsters also will sometimes sing during the night. On one occasion I heard our little favourite, the robin, singing in a copse quite late on a dark night in October, the song being repeated several times in a clear and distinct tone, and not as if the bird had been alarmed in any way.

Fyfield, near Abingdon. W. H. WARNER.

245. With reference to the enquiry of Mr. N. C. Vaisey, I may say that I have occasionally heard the hedge-sparrow singing at about midnight, or in the small, dark hours of the morning. The last time I listened to this night-singer was in the spring of 1903, two or three times. I have sometimes heard the cuckoo during the nocturnal hours of May, and the skylark has often commenced his charming song in the faint, early twilight. More rarely I have also recognised the notes of the blackbird in the middle of the night.

While engaged in astronomical observations during the nocturnal hours, I have often been surprised at the large number of birds passing over. They can be

heard at frequent intervals. Some of them must be at great heights in the air, for several minutes will occasionally elapse from their first audible cries or calls to the last sound of them in the opposite direction. At certain periods of the year I have noticed a frequent repetition of similar notes, whence I usually infer that the flights or migrations of various kinds of birds are common to special and well-defined epochs.

Bishopston, Bristol, W. F. Denning, F.R.A.S.
May 12, 1905.

246. Golden Oriole.—On April 27 a pair of Golden Orioles was observed in a garden at Shottery. The last record of the species occurring in the Stratford district dates back some twenty years, when a single bird was noticed, and of course shot. Fortunately, one of the two persons who saw these orioles was a competent observer, who had frequeutly come across the birds in the South of France, so that there can be no doubt as to the identification. I am thankful to add that the birds were not molested here, although I gravely fear that they will eventually be "collected" as a reward for their temerity in visiting these inhospitable shores.

Stratford-on-Avon, Reginald Hudson.
May, 1905.

247. Starlings in Australia.—A newspaper cutting headed "Cure Worse than the Evil," says: "So serious has the destruction of fruit crops by the descendants of imported British Starlings become, that the Royal Agricultural Society of Victoria is joining with other similar societies in petitioning the Government to take energetic measures for their reduction. The birds were originally introduced for the destruction of insects, and special laws were enacted for their rigid protection." The transportation of a creature from its own to another continent is often accompanied by unforeseen results and great change of habits. No doubt those who turned the English rabbit loose in Australia thought they were adding to the sport and attractions of the country. But it has turned out a downright curse. The English sparrow long ago proved the reverse of a blessing in America, having taken to even worse habits than here. On landing in Australia our hive bee industriously collected quantities of honey. Finding, however, that there was no winter such as we have in England, it gave up laying in stores. Its morals are corrupted; for it is no longer "busy," and leads a butterfly life. A change seems to have come over the starling in Australia. Not finding his usual diet of wire-worms and chafer grubs at the other side of the world, he has turned his attention to the first food ready to hand, and preys upon the Australian's fruit in a most unpleasant way. But, because of taking to evil courses in the Antipodes, probably forced on him, it is to be hoped the starling's character will not suffer in the British Isles; for here he is a useful bird. The leaflet on "The Starling," issued by the Board of Agriculture, which can be had on application to the Secretary, free of all cost, is well worth reading. The leaflet on tits also is admirable, and the Board wish their publications circulated.

With many persons Government papers have great weight and Selbornians would do good in distributing some of these leaflets.

Southacre, Swaffham, Edmund Thos. Daubeny.
May, 1905.

248. Blue Tits.—The propensity of blue tits to place their nests in letter-boxes, though interesting, is embarrassing. Every spring a pair nests in my letter-box, going in and out through the slit, which is on the public road. Not wishing to disturb them I lock the door of the box and hang a temporary cage on the adjoining gate, for the use of the postman. But as this is awkward, I put up close by, in the garden, a disused box with a similar slit, on the top of a post about five feet high, hoping that the birds would prefer the greater security and privacy of this arrangement and allow the other receptacle to be used for its legitimate purpose. But this was not to be. A second pair of tits has taken possession of the new home and there is now a nest in both boxes, with about eight eggs in each. The nests are beautifully constructed and the lining is a model of luxurious softness. A. L. H.

Buxsted,
May 5, 1905.

249. A Wood Pigeon's Short Bereavement.—Recently, there was found in the garden of my late residence the partly eaten remains of a wood pigeon, one of a pair, which no doubt had fallen a victim to the cat. For a few days the grief-stricken mate of the dead bird hovered round the spot, to all appearances inconsolable for her loss. However, the sorrowing bird did not wear the willow long. She soon found a balm for her grief in the form of another mate and at present is an expectant mother on her nest in a tree close to the scene of her late bereavement.

37, *Alwyne Villas, Canonbury, N.* CHAS. E. J. HANNETT.
April 9.

250. Ducks Nesting in Kensington Gardens.—If a correspondent who writes as to a duck nesting in a tree near the Serpentine will look at some of our back volumes for the last few years he will find full accounts of this and other features of bird-life in the Gardens, in Mr. A. Holte Macpherson's annual "Notes on London Birds."—ED. *N.N.*

251. Honeydew.—Mr. Daubeny is mistaken. He quotes from me as saying that aphides are found on only a few kinds of trees. I said that these copious discharges of honeydew are found on only a few kinds of trees, instancing especially the maple and lime trees. I found none on poplar, plane, &c., at the same time.

I have not seen aphides on the leaves of any of the trees that I have seen covered with a profuse discharge of honeydew, running over and dropping on the pavement below. I only speak of things as I find them by observation, and I am only one observer among many. I hope Mr. Daubeny will excuse my still retaining my opinion that those great attacks of honeydew, covering our pavements as they did last summer, are not caused by aphides. I shall willingly change my opinion, when I see any evidence that they are.

Hampstead, PETER HASTIE.
April 18, 1905.

252. Fertilisation of the Primrose and Honey-suckle.—Last year the pages of NATURE NOTES contained interesting remarks on the pollination of the primrose. I have watched the primrose with care; and find that practically none of its flowers are fertilised by bees or moths, or flies with long proboscis, their visits being extremely rare. This office is carried out by very small insects that enter and move about inside the tube. On April 15 I examined a number of primroses, with the following results: 40 per cent. of the tubes were tenanted by small jet-black beetles about the size of a flea. In almost every instance there was a single pair, even at the bottom of the tube, or on the pollen inside the tube in about an equal number of cases.

It is well known that the hive-bee does not visit the honey-suckle; and it seems to me that many of its flowers would escape fertilisation by humble bees or lepidoptera were it not for the agency of small insects. Last year I examined one of my honey-suckles. On every flower there were from thirty to forty small insects somewhat in shape like thrips, but much larger. As these were lively and moved about in all directions, they must have proved efficient fertilisers.

It should be added that bees of all kinds are very fond of visiting our garden *Primulas.*

EDMUND THOS. DAUBENY.

P.S.—Let me add that on May 8 I examined the same plants I had seen in April, and picked twenty-five flowers. These I tore open and could find no insect of any kind in the tubes. I do not pretend to be a botanist, but as an entomologist should give the following interpretation. The small beetle's reign had passed by previous to May 8; and, on the supposition that the primrose is fertilised principally by it, I should conclude that late primroses are less likely to have seed than early ones, and that Nature encourages early flowers in this plant. I have not seen any bee, fly, or moth, visit a primrose this spring and I am always on the look out.

253. Primroses.—Never do I remember such a splendid primrose display as that to be seen in the woods here during this present springtime. Morning after morning I am afraid I have broken my Selbornian principles and gathered a buttonhole and a bunch of the pale sulphur-yellow blossoms before breakfast. Two things I have noticed about the primrose during my visits to the woodland at break of day. One is, I have observed that the flower-heads on extra fine clumps have been bitten off by what I suspect to be some bird or animal (I strongly suspect rabbits), but not devoured, the fine blossom heads being strewn all around the plant. Can any Selbornian enlighten me upon this point? Who are the culprits and why are the flowers bitten off just below the calyx and left where they are dropped? Secondly, I have noticed repeatedly that the pin-eyed variety throws the finest blossoms, at any rate, in this district. Has this been noticed elsewhere? I have also found one plant of primroses this spring bearing pure white flowers.

W. PERCIVAL WESTELL, F.R.H.S., M.B.O.U.

[Mr. Daubeny does not say whether his watchfulness extends to the evening and night; nor does he seem to realise the very important deductions as to evolutionary teleology which will be drawn if it can be proved that a large, long-tubed, brightly coloured and sweet-scented flower like the primrose is beetle-fertilised. Honeysuckle is constantly visited by humble-bees, to say nothing of *Sphingidæ*. My own observations in my garden make me believe sparrows to be the culprits after whom Mr. Westell enquires, and pure mischief their sole apparent motive.—ED. *N. N.*]

NATURAL HISTORY QUERIES.

52. Individual Tunes of Birds.—I should like to ask if any correspondent is able to distinguish individual birds frequenting a particular locality by the peculiarity of their "tune"? To illustrate what I mean, and to show the manner in which birds attach themselves to certain limited "pitches," I may take the case of my own garden. Three years ago a blackbird was observed in a certain part, with a white head. This peculiarity, of course, afforded an easy means of distinguishing him from his fellows, and it was soon found that his home was really in my neighbour's garden, across the road. Later, he appears to have transferred himself entirely to me. Two years ago, and again last year, he was constantly seen, always confined to a certain limited pitch, with his mate. There he sings his song, and rears his brood (cats and other difficulties permitting), and there he remains this year. Now, on the other side of the garden, lives another blackbird, with no such distinguishing characteristic, but who is easily known from all others by his "tune," a quaint, amusing sequence of notes, interjected only at somewhat rare intervals into the rest of his song, but easily noticeable by anyone with an ear for sound. When it occurs the attention of the hearer is arrested, and he breaks off his reading or writing, listening eagerly for a repetition of the notes. But, though the song continues, the repetition waited for is often long in coming, so long, possibly, that the hearer has meanwhile resumed his occupation, only to have his attention suddenly arrested as before. And so it may be heard any day at intervals, from daylight to dark. This singer's place is in the old oak tree near the gates, or the immediate neighbourhood. There he sang the same tune last year, and there he is working at it now.

There are, of course, many other blackbirds about, each, no doubt, having his own patch or pitch, and any one may easily be "marked down" for observation while singing, but in no case that has come under my notice does the tune bear the least resemblance to that of the one described above. Similar remarks might be made about a bird known to us as "the minor thrush," from his habit of always singing his song in a sort of minor key; but enough has been said to make clear the meaning of my enquiry. Much has been said about birds returning to the same spot year after year, or what are assumed to be the same; but if the difference or peculiarity of tune obtains to any extent, here

seems to be a possible means of identification which has not hitherto been much followed up. Or do all birds of a kind sing practically alike, and is any such deviation only an occasional exception?

W.

53. Address Wanted.—"Severn" writes, asking for the address of Mr. Charles D. Head, inventor of a new process of bird-stuffing recently described in the *Daily Mail*.

SELBORNE SOCIETY NOTICES.

[NOTE.—ALL ANNOUNCEMENTS WITH REGARD TO MEETINGS OF THE CENTRAL SOCIETY OR BRANCHES WILL BE FOUND TOGETHER AT THE END OF THESE NOTICES.]

New Members.—*Central Society.*—Miss Bentley, Oxford and Cambridge Mansions; Miss D. Blore, Eaton Terrace; Miss Lilian J. Clarke, B.Sc., F.L.S., Dulwich; E. T. Craig, Esq., Gray's Inn; John Fitzwater, Esq., Weybridge; John A. Flower, Esq., Westcliff-on-Sea; A. Goodman, Esq., Primrose Hill; the Rev. H. N. Hutchinson, M.A., Hampstead; Jonathan Hutchinson, Esq., M.D., LL.D., F.R.S., Cavendish Square; H. B. Lacey, Esq., Chelsea; Edward Leonard, Esq., Q.M.C., Ilford; John L. Luscombe, Esq., S. Devon; Miss McMillan, Sloane Square; F. W. Rudler, Esq., I.S.O., F.G.S., Kilburn; Malcolm Seton, Esq., Mrs. Seton, Holland Park; Arthur Sharland, Esq., Sydenham.

Birmingham Branch.—Miss Marian Burd, Birmingham.

Clapton Branch.—Mrs. A. W. Lindy, Victoria Park Road.

Hampstead Branch.—James Carter, Esq., Admiralty; J. Roberson Day, Esq., M.D., Hampstead; W. E. Doubleday, Esq., Mrs. Doubleday, Willesden; Ernest Fryett, Esq., Crouch End; Sidney Greenhill, Esq., Hampstead; W. B. Partridge, Esq., Great St. Helens; Miss Winifred Walker, Hampstead.

Subscriptions.—The Council has great pleasure in acknowledging subscriptions of greater value than 5s. from the following members: Frederick Crowley, Esq., £1 1s.; R. M. B. Otter Barry, Esq., 10s.: J. H. Master, Esq., 10s.; Miss Gordon, 7s. 6d.; H. B. Lacey, Esq., 7s. 6d.

Contributions.—The Council is also pleased to announce that the Ealing Branch has contributed the sum of one guinea towards the expenses of the Annual Conversazione, and that the Hampstead Branch has been so good as to make a grant of £3 7s., being 1s. per head for every member of the Branch who attended on that occasion.

Library.—The Honorary Librarian will attend at 20, Hanover Square, from 6 p.m. to 6.30 p.m., on the evenings when the Publications Committee meets (at present on the Second Monday in the month), for the purpose of issuing books to members.

The Honorary Librarian has pleasure in announcing the following additions to the Library: "British Bird Life," by W. Percival Westell; "The Camera in the Fields," by F. C. Snell; kindly presented by the Editor.

FIELD CLUB RAMBLES.

Saturday, April 29.—Twenty-two members assembled at Chipstead for the first ramble of the season. After a short stroll along the pretty Chipstead Lane, a field-path was entered leading for about a mile through a plantation. Bluebells, windflowers, cowslips and violets were abundant, and a few specimens of the Greater Celandine were observed, although thus early. Great interest was shown by a portion of the party in observing the efforts of some villagers to capture an errant swarm of bees safely hidden in a hollow beech tree. The fine smooth lawn of Shabdon Park was much admired, as well as the pretty village of Upper Chipstead. The nightingale and cuckoo, blackbirds and thrushes, were listened to; and finally, at the charming Howe Green cottages, tea was served. Among the finds may be mentioned *Morchella esculenta*, the once well-known edible Morel, now for the most part an imported delicacy.

Saturday, May 6.—About eighty took part in the field excursion to Moor

Park, Rickmansworth, including eighteen members of the Hertfordshire Natural History Society. By the courtesy of Lord and Lady Ebury the famous gardens of Moor Park were thrown open. This is not the Moor Park of Temple and Swift, which is situated near Farnham, Surrey. By permission of the noble owners the Selbornians made the round of the apartments on the ground floor. Possibly a little reminiscent of Bowood is what is known as the Italian Garden, on the Watford side of the mansion. At present the beds are bright with variously coloured wallflowers. Irresistible in its charm is another spot in the park, on rising ground towards Batchworth Heath, where are to be seen some remarkable conifers—cedars, yews and pines. Here one giant spruce, which seems to have ceased growing in its central stem, is surrounded with nearly a ring of small trees springing, as it were from its own re-rooted branches.

Saturday, May 13.—On the afternoon of May 13 twenty-seven members assembled at Leatherhead, and were conducted by Mr. A. B. Wilkinson through Norbury Park to Mickleham and back. In a pond near the starting-point, mare's-tail (*Hippuris*) was found growing in great profusion. Leeches and stimps (freshwater Planarians) were discovered in abundance under stones beneath the water, while the many swans and the coots upon their nests also attracted attention. The country traversed was particularly pretty, and after tea—which was taken at Mickleham—a special vote of thanks was passed to Mr. Wilkinson, on the motion of Mr. Walker, seconded by Mr. Mühlberg.

NEWS FROM THE BRANCHES.

Kensington.—Miss Tickell, the Honorary Secretary of the Branch, has removed from 20, Cromwell Crescent, to 6, Cromwell Crescent, W.

North Middlesex (Junior).—On March 17, Mr. C. M. Hall, M.M.S., gave a demonstration on "Freshwater Molluscs." He prefaced his address by a brief description of Mollusca in general, and regretted that there were practically no popular names for his many exhibits. Beautiful specimens of fossil shells, principally of the Eocene period, were on view, and also living specimens of a great many species referred to in the lecture. Mr. Hall also laid before his audience for their inspection his collection of British freshwater shells. Amongst the latter was an interesting variety of *Paludina vivipara*, which, instead of being of the typical colours, was unicolour throughout, a pale green.

Mr. Hall said our freshwater mollusca were of very great importance in the economy of Nature, as they were her scavengers in the water, their food being almost entirely decaying animal and vegetable matter, which they were continually clearing away. Without this, our lakes, ditches and ponds would very soon become like open cesspools. Humble and practically unknown to the general public, their unnoticed duties were of great value in preventing the evolution of noxious gases from stagnant water.

A children's section of this Branch was opened on April 29 by Mr. C. M. Hall, M.M.S. A good number of children attended and were admitted. Mr. Hall exhibited a typical collection of British beetles, butterflies, moths and shells, and the proceedings were of a most encouraging nature. On Saturday, May 6, a second meeting was held. Miss E. M. Grint (Associate) gave a demonstration on Freshwater Insects, and exhibited *Dytisci*, *Phryganea* and *Limnophila*. Mr. Hall afterwards attended and gave a short address to the children, encouraging them to study Nature, and to practise kindness to animals.

The number of members of the new Section is now twenty-six. Its successful organisation is due to the efforts of the lady Associates of the Branch, especially Miss E. M. Grint, who has been appointed Secretary of the Section.

FORTHCOMING EVENTS.

Central Society.

Business Meetings.—The next meeting of the Council will be held on Tuesday, June 27, at 5.30 p.m.

Field Club Rambles.

Saturday, June 3.—Chenies District. *Book to Chalfont Road.* Baker Street (Metropolitan), 2.20; Swiss Cottage, 2.18; Finchley Road, 2.20. Special cheap tickets, 2s. return, obtainable at Baker Street Station only.

Guide, Mr. James E. Whiting.

Saturday, June 10.—Bank Holiday. No ramble.

Saturday, June 17.—Clandon and Newlands Corner. Take cheap return tickets to Clandon, 2s. 3d. Train leaves Waterloo, 2.15; Clapham Junction, 2.27. Meet at Clandon Booking Office, 3.30. Tea at Newlands Corner. Return trains from Clandon, 8.26, 9.22.

Guide, Mr. A. B. Wilkinson.

N.B.—Kindly verify the time of trains by the June time-tables.

Saturday, June 24.—Guildford neighbourhood. Meet Mr. Webb at Waterloo (L. & S.W.R.) at 2.5 p.m. If ten adults travel together the fare will be 3s. 2d. return (otherwise 5s.); children under 12, 1s. 7d. Train 2.15 p.m., from Waterloo (L. & S.W.R.), Guildford, 3.33. Route: Hogsback and Pilgrim's Way, Watts Cemetery Chapel. Tea at Compton Village Café. Visit St. Nicholas Church, return to Guildford across Loseley Park; distance, 7½ miles. Return train, 8.27.

Guide, Mr. E. Chapman, of the Woking Field Club.

It would be a convenience if those who intend to join this ramble would send a postcard as soon as possible to Mr. Webb at Odstock, Hanwell, W., so that he could make arrangements for reserved compartments and reduced fares.

Saturday, July 1.—Cassiobury Park and Gardens, Watford; (the Gardens by kind permission of the Hon. W. R. W. Peel, M.P.), through Whippendale Wood to Chandler's Cross. Tea at Keeper's cottage. Meet at Watford Station (L. & N.W.R.) at 3 p.m. Trains leave Broad Street, 1.45 Euston, 2.20. Cheap tickets can be taken at Euston, 1s. 9d. return. Distance, 6 miles. Return trains leave Watford 7.47 and 8.35. The Hertfordshire County Council Teachers' Nature-study Class will join in this ramble.

Guide, Mr. W. Percival Westell, F.R.H.S., M.B.O.U.

Saturday, July 8.—Drive (cost about 1s. 6d. a head) from Chalfont Road Station to Jordans to view Quakers' Meeting House, built in 1688. Return to Chalfont St. Giles for tea (9d. each), then proceed by field-paths to Chorley Wood Station. *Book to Chalfont Road.* Baker Street (Metropolitan) 2.20; Swiss Cottage, 2.18; Finchley Road, 2.20. Special cheap tickets, 2s. return, obtainable at Baker Street Station only.

Guides, Messrs. Douglas Wilson and Geo. Avenell.

N.B.—Those intending to be present are particularly requested to notify Mr. James E. Whiting, 41, Heath Street, Hampstead, N.W., on or before *June* 26, as seats for the drive cannot be otherwise assured.

Further Rambles already Arranged.

Saturday, July 15.—Iver and neighbourhood.

Guide, Mr. Wilfred Mark Webb, F.L.S.

Saturday, July 22.—Weybridge and neighbourhood.

Guide, Dr. Henry Willson.

Full particulars of these will be given in the July magazine.

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1. All communications for NATURE NOTES must be authenticated with name and address, not necessarily for publication.

2. The return of an unaccepted contribution can only be guaranteed when it is accompanied by a stamped and addressed envelope. We cannot undertake to name specimens privately, to return them, or to reply to questions by letter.

3. All communications for any number must be in the Editor's hands by the 10th of the preceding month.

4. Communications for NATURE NOTES, books for review, specimens for naming, &c., should be addressed to the Editor, PROFESSOR BOULGER, F.L.S., F.G.S., 11, Onslow Road, Richmond, Surrey.

5. For the supply of the Magazine to others than members, or for back numbers (except in the case of new members), address the publishers, with stamps at the rate of 2½d. per number, Messrs. JOHN BALE, SONS AND DANIELSSON, Ltd., 83-91, Great Titchfield Street, London, W.

6. Letters connected with the business of the Society, subscriptions, and applications for membership, should be sent to the local Honorary Secretary, or to the Honorary General Secretary of the Society, WILFRED MARK WEBB, F.L.S., at 20, Hanover Square, London, W.

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Nature Notes:

The Selborne Society's Magazine.

No. 187. JULY, 1905. Vol. XVI.

OBJECTS OF THE SOCIETY.

To promote the study of Natural History. To preserve from needless destruction such wild animals and plants as are harmless, beautiful, or rare. To discourage the wearing and use for ornament of: (1) The skins and furs of such animals as are in danger of being exterminated; (2) the skins and plumage of such birds as are not domesticated. To protect places and objects of natural beauty or antiquarian interest from ill-treatment or destruction. To afford facilities for combined effort in promoting any of the above or kindred objects.

NINETEENTH ANNUAL REPORT, 1904-1905.

Adopted at the Annual Meeting, May 3, 1905.

I.—General.

THROUGHOUT the year which has passed, increasing interest has on all sides been manifested in the work of the Selborne Society, and your Council has particularly to thank Mr. Marshman Wattson for the improved financial position in which he placed the Society during his period of office as Secretary.

The Annual Meeting, owing to the kindness of the Civil Service Commissioners and His Majesty's Office of Works, was organised most successfully upon a much larger scale than previously, and was calculated to give greater publicity to the efforts of the Society, which still needs to have many more members and far greater resources if it is to push forward its objects to the extent which it could well do.

The Restoration of Selborne Church.—Your Council called attention to the fund for repairing Selborne Church and its bells, with some effect, and itself made a contribution.

II.—The Study of Natural History.

Nature-Study.—Your present Secretary, Mr. Wilfred Mark Webb, was specially asked to read a paper on Nature-Study at the Congress of the South Eastern Union of Scientific Societies held at Maidstone during the summer of 1904. On the occasion in question, the number of auditors was swelled to some 500 by the invitation of the elementary schoolmasters and mistresses, as well as pupil teachers from the surrounding neighbourhood, who attended with the cordial approval of the Kent Education authorities. His paper has been printed in full in *The South Eastern Naturalist* for 1904. An address, illustrated by lantern slides, was also given by the Secretary on January 23, 1905, to the Hammersmith Industrial Exhibition Society, with the view of showing those who intended to exhibit in the Nature-Study Section what sort of work was expected of them.

Up to the present, your Council has not been invited to co-operate in the organisation of another Nature-Study Exhibition, owing to the general opinion that these undertakings should not be held too frequently in London, but it will be pleased to help when opportunity offers.

The South Eastern Union of Scientific Societies.—At the Congress already alluded to, much of general natural history interest was carried out, and the Selborne Society, which subscribes to the Union, was represented by Professor Boulger, who is a Vice-President of the latter body, and by Mr. Downing and Mr. Webb, who were officially appointed delegates from the former. During the Congress Mr. Webb was elected to serve on the Council of the Union, which will meet at Reigate from June 7 to 10, 1905, under the presidency of Professor Flinders Petrie.

The Field Club.—Once again your Council has to point out your indebtedness to Mrs. Percy Myles, for arranging a ramble on practically every Saturday during the summer. The details given below will show the interest taken in these excursions, and their success, it would seem, depends to a large extent upon the fact that members need not make any plans beforehand; if they are free at the week end, there is always a ramble which they can attend.

Selborne Field Club Meetings, 1904.

Date.	Place.	Guide.	No. of Members present.
April 16	Chingford ... ... (Forest Ramble)	Mr. R. Marshman Wattson ...	22
23	Chipstead ... ... (Chipstead, Woodmanstern and Coulsdon)	Mr. Matthew Hunt	11
30	Northwood ... ... (Northwood to Batchworth Heath)	Mr. J. E. Whiting	60
May 7	Coulsdon ... ... (Coulsdon and Caterham Valley)	Mr. E. A. Martin, F.G.S. ...	10

Date.		Place.	Guide.	No. of Members present.
May	14	Waltham Abbey ...	Mr. H. Plowman, F.S.A. ...	40
	28	Pinner ... ... (Pinner to Northwood)	Mr. J. E. Whiting	60
June	4	Woldingham . .. (Woldingham to Chelsham)	Mr. Matthew Hunt	22
	11	Broxbourne ... ... (Broxbourne to Hoddesdon)	Dr. S. H. Appleford	37
	18	Weybridge ... ... (Weybridge, Laleham, and Chertsey)	Dr. Henry Willson	41
	25	Stanmore ... ... (Stanmore and the Gardens and Grounds of "The Grove")	Mr. J. W. Odell	33
July	2	Nutfield ... ... (Nutfield and Outwood)	Mr. W. H. Maw, F.R.A.S. ...	40
	9	West Drayton ... ... (West Drayton to Iver Water Splash)	Mr. Wilfred M. Webb, F.L.S. ..	27
	16	Titsey Hill ... ... (Woldingham to Titsey Hill)	Mr. Muhlberg	19
	23	Chalfont St. Giles ... (Chorley Woods to Chalfont St. Giles)	Mr. L. Douglas Wilson	47
Aug.	6	Chenies... ... ... (Chalfont Road and Chorley Wood)	Mr. C. M. Hailes	23
	13	Oxshott... ... .. (Oxshott and the Black Pond)	Mr. Matthew Hunt	19
	20	Clandon ... ... (Clandon to Newlands Corner)	Mr. A. Wilkinson	19
Aug.	27	Bricket Wood .. ... (Aldenham and Munden)	Mr. W. Percival Westell, M.B.O.U.	22
Sept.	3	Marden Park ... ... (Woldingham to Marden Park)	Mr. Matthew Hunt	7
	10	Box Hill ... ... (Dorking and Ranmore Common)	Mr. A. Wilkinson	16
	17	Stoke d'Abernon ... (Oxshott to Stoke d'Abernon and Cobham)	Prof. G. S. Boulger	27
	24	Chingford ... ... (Ramble in Epping Forest)	Mr. L. Douglas Wilson	31
Oct.	1	Coulsdon ... ... (Coulsdon to Farthing Down)	Mr. Matthew Hunt	7
	15	Loughton to High Beach. Joined the Essex Field Club. (Fungus Foray in Epping Forest)		

It will thus be seen that there were twenty-two rambles held altogether, being one in excess of those organised last year. The number of members and their friends who attended shows a very considerable increase, being 640 as against 468 recorded in the last Report, and 304 for the previous session.

Your thanks are also due in this connection to those who acted as Conductors on the various occasions.

The Selborne Saturday Afternoons.—The afternoon meetings in the winter, which have come to be called "Saturday Afternoons," are another proof of activity, and Mrs. Percy Myles was mainly responsible for these. She was given considerable help, however, in connection with the visits to the Halls of the City Livery Companies.

The list of meetings and the details of them are as follows:—

Selborne Saturday Afternoons.

Date.	Place.	Guide.	No. of Members present.
1904.			
Nov. 12	Natural History Museum (Botanical Department)	Prof. Boulger	35
26	Stationers' Hall and Apothecaries' Hall	Messrs. C. R. Rivington, F.S.A., A. Mowbray Upton and C. R. B. Barrett, M.A.	90
Dec. 10	St. Saviour's Cathedral, Southwark	Rev. Canon Rhodes Bristow ...	35
1905.			
Jan. 14	Gray's Inn	Mr. M. D. Severn	55
28	Natural History Museum (Botanical Department)	Dr. Rendle, F.L.S.	35
Feb. 11	Vintners' Hall	Mr. George Avenell	63
25	Lambeth Palace ...	The Librarian, Mr. S. W. Kershaw, M.A., the Rev. H. Holden, M.A., and Mr. Potter	121
Mar. 11	Houses of Parliament ...	Lord Avebury	120
25	Tallow Chandlers' Hall and Innholders' Hall	Messrs. M. F. Monier-Williams and J. Douglass Mathews, F.R.I.B.A., F.S.A.	69
8	Kew Gardens	Prof. Boulger	46

There was a slight decrease in the number of the "Afternoons" during the season, but the average attendance increased from 49 to 67. To all those who contributed to the pleasure of the members on the different occasions, the special thanks of the Society are due.

III.—The Protection of Animals.

This object has by no means been lost sight of, though there is no very important work to chronicle. As a result of repeated requests for information, Mr. Mühlberg, a member of your Council, has prepared a statement with regard to the possible extermination of fur-bearing animals, which will be printed in Nature Notes.

The Hampstead and Ealing Bird Sanctuaries were both maintained during the year.

Your Council has no doubt that every member of the Society will wish to be associated in the protests so generally made against the repeated shooting of bitterns, ospreys, and other rare birds which have occurred during the year.

IV.—The Protection of Plants.

Professor Boulger has been active in forwarding the movement for the proper protection of plants, and he has invited the help of the South-Eastern Union of Scientific Societies, which, as a result, has issued a circular letter upon the subject. He also gave a lecture, dealing with the matters at issue, before the Royal Horticultural Society, on August 23, 1904, which will appear in that Society's journal.

V.—Places of Antiquarian Interest and Natural Beauty.

Whitgift Hospital.—For the present the danger to this most interesting Elizabethan building has passed, but possibly the Corporation of Croydon may again take up their project of street widening in the next session of Parliament. The Croydon Antiquities Protection Committee, therefore, is not relaxing its efforts to bring before the public the value of the building as a piece of architectural history. Your Council as a body and its individual members have afforded sympathy and help to the Committee, and the latter, it may be mentioned, has published an illustrated pamphlet, by Dr. Hobson, which is sold at the trifling cost of threepence.

Hampstead Heath.—During the year Hampstead Heath has been extended by the addition of the eighty acres of Wylde's Farm, which have been practically secured in accordance with the proposal to which allusion was made in last year's Report.

The Pryors, Hampstead.—Last year mention was made of the regrettable fact that this small, well-wooded estate had fallen into the builder's hands. The Parks Committee of the London County Council had listened to the request of the Hampstead Branch that, if possible, something should be done to counteract the assertiveness of the huge block of flats erected, and had caused the planting of a number of small though quick-growing trees, which, it was hoped, would in due course serve as a screen. This was a step in the right direction, and the County Council thus seemed to accept the principle of protecting the picturesque which the Society had urged. Near by the flats, on the public part of the Heath, however, had stood for many years a row of very fine trees. To the great surprise of all, early in June last year, one was felled and a vigorous onslaught on the others was begun. This reversal of policy received the immediate attention of the Hampstead Branch, and letters from members of the Committee protesting against the spoliation were printed in the *Times* and the local Press, while communications were also addressed to officials of the County and Borough Councils. The first of these bodies replied, after some delay, defending the cutting, on the ground of an overlap, and saying that it was better for the Council to do judiciously what the owner of the flats had a right to do himself and might have done badly. That the trees were lopped far beyond the needs of the case is now obvious to all who take the trouble to look at them, and the result is that what was formerly a row of widespreading elms is now practically a series of one-sided deformities.

Golder's Hill.—In the spring of 1904 a suggestion which attracted considerable local attention was made by Mr. James E. Whiting, namely, that squirrels should be introduced into this pleasaunce. His suggestion was conveyed to the London County Council by the Hampstead Branch and an answer was received

that if the Selborne Society would make a gift of the animals they would be accepted and taken care of. Attempts to obtain English squirrels have since been made in various quarters, but up till now without success.

It is to be regretted that as time goes on the picturesque at Golder's Hill tends to disappear. Those responsible for its upkeep evince too great a disposition to sacrifice what is natural for what is convenient. What is required is to leave the place more alone and so to give Nature a chance in it. Efforts to make things appear rustic almost invariably end by making them look artificial, and this is essentially the case at Golder's Hill. If there was one part of the grounds more charming and secluded than another when they were made over to the public it was the Old Pond Head. Among the reeds and sedges warblers chattered, and not long ago even the nightingales' notes might have been heard. In the reeds, too, a large colony of wagtails roosted, but the alterations now in progress are driving them and other birds away. The dell in this part of the grounds is at present being levelled with a liberal layer of London clay, of which an ample supply is available at the workings of the new Tube close by. To these undesirable changes notice is being directed, but much damage has already been done.

Thames Preservation.—On several occasions during the year the amenities of the Thames and its banks have been in danger, it being proposed to construct a dockyard at Lot's Eyot, Kew, to erect a wharf and a galvanised iron shed at Cambridge House, Hampton Wick, and to destroy an eyot at Windsor. In each of these cases protests were lodged on behalf of the Society, and, in two cases at least, all danger has been averted.

Avon Gorge.—Less success has attended the efforts which the Society, in common with many lovers of natural beauty, have been making to preserve the gorge of the Avon below Bristol from ruinous disfigurement by quarrying. No impression seems to have been made on the apparent indifference of the Corporation of Bristol.

Snowdon and Bettws-y-coed Light Railway.—In the Act of Parliament it is said that endeavours will be made not to interfere with the beauty of the country traversed. The mere approach of a railway with embankments and bridges to the beautiful environs of Snowdon is, however, such a desecration that assurances of the kind seem to be but a small consolation for the sanctioning of the line. Here, again, utilitarian counsels have prevailed.

Ulleswater.—Your Council has done all in its power to forward the appeal of the National Trust for funds to enable them to secure Gowbarrow Fell, Aira Force, and the adjacent foreshore of Ulleswater as a national park or reserve, and is glad to think the scheme is making considerable progress.

Warley Woods.—Meanwhile it is due to the initiative of one of

your Branches that steps are being taken to preserve part at least of Warley Woods, on the north-west of Birmingham, from the builders' hands. Your Council considers this action on the part of the Birmingham and Midland Branch an apt illustration of the utility of local Branches as permanent centres for the organisation of local effort, especially on occasions of emergency.

Telegraph and Telephone Poles.—You were represented by your Editor and Secretary on a deputation to the Postmaster-General on January 16, with regard to the disfiguring of views with unsightly telegraph and telephone poles. The action was taken by the Commons and Footpaths Preservation Society, and the immediate question arose out of a proposed line of wires across Epping Forest. The Postmaster-General expressed himself as being in sympathy with the deputation, and promised to give every possible consideration to the natural beauties of proposed routes. The result of the deputation was that the intention to erect poles across the Forest was abandoned.

The Advertisements Regulation Act.—Your council strongly supported the Bill which Lord Balfour of Burleigh introduced into the House of Lords on behalf of the Society for Checking the Abuse of Public Advertising, a paragraph in Clause 2 of which, relating to the disfigurement of views, is particularly in keeping with the objects of the Selborne Society. There seems to be considerable hope that in its amended form "the Bill will get through Committee."

VI.—Publications.

"*Nature Notes.*"—The intention that the Magazine should be better illustrated has been carried out and the short "notes" still continue to be of particular interest. This latter statement is borne out by the large number of references made to them in the general Press. The largely increased space devoted to the excursions, meetings of Branches and business of the Society will also have been noticed. Your Council feels, however, that there is still much that might be done to improve the Magazine, and would appeal to its readers for more short articles giving the results of personal observations.

It has been decided that in the near future the Magazine shall be sent to members packed flat in envelopes instead of folded within wrappers.

The best thanks of the Society are due to your Editor for his valuable services.

Prospectus.—A new illustrated prospectus, setting forth the objects of the Society and the advantages which it can offer to members, is in course of preparation.

VII.—Library.

Arrangements have been made for the issue to members of books from the Library, and lists have already appeared in the Magazine. Your thanks are due to the present Honorary

Librarian, Mr. Hubert Poole, for the trouble he has taken in the matter.

It is hoped, with the help of members, and as the result of some judicious expenditure, to develop that part of the Library which deals with Gilbert White and the various editions of his book.

VIII.—Organisation.

Membership.—The members of the Society (including the Bath Branch not previously counted) on March 31, 1904, numbered upwards of 1,700.

Rules.—It will be remembered that during last session the Rules were revised. One or two members, however, thought that the paragraph in the "objects" relating to birds was open to objection, and at a special General Meeting held on November 22, 1904, Rule II., paragraph c., section 2, which ran as follows: "Birds and their plumage, except when the birds are killed for food, reared for their plumage, or are known to be injurious," was altered so as to read, "The skins and plumage of such birds as are not domesticated." The Rules as they now stand were printed in full in Nature Notes for January, 1905.

Officers.—There have been several important changes made in connection with your Officers. Two years ago it was felt that the Editor should be offered some payment, but Professor Boulger preferred, at the time, still to give his services for nothing. At the beginning of the financial year, however, after six years' service, he intimated his willingness to accept your Council's offer of a small yearly honorarium.

In the autumn, Mr. R. Marshman Wattson, who had been Secretary for four years, found that he could no longer devote the necessary time to the work of the Society, and he was succeeded by Mr. Wilfred Mark Webb, F.L.S. As Mr. Wattson's services were in reality gratuitous, seeing that the allowance made to him was swallowed up in expenses, it was decided to give Mr. Webb the title of Honorary Secretary.

Mr. Webb on his appointment resigned the office of Honorary Librarian, and Mr. Hubert Poole was elected in his stead; allusion has already been made to the work of the latter.

At the close of the financial year ending March 31, 1904, Mr. George Avenell expressed his desire to be relieved from his duties as Chairman of your Council, which he had fulfilled for four years with such zeal that he attended practically every meeting of the Council and its Committees. He allowed himself, however, to be over-ruled, and continued in office during the past session, but he decided not to take office again. Your Council has therefore to appoint a chairman in his place.

District Secretaries.—The method adopted by the Bath Branch of appointing District Secretaries might well be introduced by

the Central Society in places where there are no Branches or where their funds are not devoted to active work.

Junior Branches.—Your Council attaches considerable importance to Junior Branches, and it has succeeded in forming six new ones during the year. These are: (1) North Middlesex; (2) King Edward VI. Natural History Society; (3) "Laleham" (Clapham Park); (4) Rowland Houses Nature-Study Society (South Kensington); (5) Seaford; (6) Clapham High School Field Club (Clapham Common). Most of the Junior Branches are school natural history societies, and the members of these are given some status and considerable encouragement by becoming Associates of the Selborne Society.

Your Editor, Librarian and Secretary have each given addresses to new Junior Branches during the past few months.

Branches.—In some places circumstances arise which render it impossible for a Branch to attain that size and influence which makes it of advantage to the Society, or to the members of which it is composed. During the year it has been decided to merge two branches, namely, those of Halifax and Portsmouth, into the Central Society. The following extracts from accounts which have been received will give an idea of what some of the Branches have been doing.

Bath.—The Bath Branch of the Selborne Society was founded in 1887, with a nucleus of 45 members. The membership is now 294, and there has been less alteration than usual in the composition of the Board during the past year, 20 members having left, while 31 new members have been elected.

In February, Mr. Bligh Bond, F.R.I.B.A., gave an extremely interesting lecture on "Rood Screens," to a crowded audience, and in March, Mr. Mowbray Green, A.R.I.B.A., gave another architectural lecture on the "Work of the Woods in Bath," to a large number of members and their friends.

The first excursion of the season was held on April 28, when Mr. Milburn conducted more than 60 members over the Botanic Gardens.

On May 13, the Rev. H. H. Winwood, M.A., F.G.S., took a party of 55 members to Wick Rocks. On May 28, Mr. M. H. Scott conducted 24 members over Lacock Abbey. On June 11, a dozen members went to Cheddar, saw over Gough's Cave, and drove up the Gorge and through Burrington Combe to the light railway at Langford. The Annual Meeting was held at Warleigh Manor, where 80 members enjoyed the hospitality of the President and Lady Mary Skrine, on June 23. On July 9, Mr. A. Trice Martin, M.A., F.S.A., took a large number of members around Caerwent, and pointed out the numerous Roman remains in that place. On September 3, Camerton Court was visited by the kind invitation of Miss Jarrett. On September 10, Sir Edward Strachey, Bart., very hospitably entertained the members at his seat, Sutton Court, after which the so-called Druidical stones at Stanton Drew were inspected.

During the autumn there was a lecture on Switzerland, by the Rev. H. J. Heard, M.A. On October 21 and on November 10, Mr. E. Enock, F.L.S., gave his charming lecture on the "Wonders and Romance of Insect Life."

It is satisfactory to note that this Branch of the Selborne Society is well maintaining the high position it occupies in the city.

Birmingham.—During the past year an endeavour has been made to further the objects of the Society by means of lectures, the distribution of notices on the preservation of birds and plants, and in various other ways.

In March last, Professor Bridge, F.R.S., gave a very interesting lecture in the University, on "How Fishes Talk." Upwards of seventy members and friends were present; at the close of the lecture the audience was invited to inspect the

Zoological Museum, which contains many interesting and rare specimens, some of which were used by Professor Bridge to illustrate his lecture.

The "Town Hall" Lecture was given on November 16, by Ernest Thompson Seton, on "Wild Animals I have Known." The floor and great gallery of the Hall were filled, as before, with children invited from many of the primary schools of the city, accompanied by their teachers. Mr. Seton's lecture, in which he introduced some thrilling stories of his adventures with bears, evoked great applause, especially from the children, who were evidently delighted with the stories and also the lantern slides. Some of the school-boys present afterwards wrote a very good summary of the lecture, and reproduced from memory several of the illustrations, thus showing that they not only enjoyed the lecture at the time, but remembered what they had heard and seen. Sir Hallewell Rogers again kindly presided.

Three excursions were arranged during the summer, namely, to Dodder Hall Common, Cattespool and Yardley.

Brighton Branch.—Two events during the past year may be mentioned. On April 16, a lecture was given by Mr. F. Enock, F.L.S., on "The Wonders and Romance of Insect Life." Invitations were issued to members of the Brighton Natural History Society, masters of elementary schools and others likely to be interested.

On July 23 the members of the Branch, on the invitation of Mr. J. Eardley Hall and Mr. Blackburne, visited Barrow Hill, Henfield, the residence during most of his life of William Borrer. Their hosts are the grandchildren of the celebrated botanist, and though his botanical garden is not maintained as such, many interesting trees and plants of his collection remain and are carefully tended. During the afternoon Miss Robinson, of Saddlescome Farm, discoursed pleasantly on some species of Down flora.

Reports of the proceedings on both occasions have been published in NATURE NOTES.

Clapton.—Below is given the syllabus of the meetings which have been held by the Branch.

1904.		Subject.	Lecturer.
Oct.	15	"Snails Shells"	Miss A. S. Philpott.
*Nov.	19	"Some Religious Monuments of North Brittany"	Chas. E. Allnutt.
Dec.	17	"Plant Lore and Legends"	Mrs. Durrant.
1905.			
Jan	21	"Some Legendary Explanations of Natural Markings in Living Nature"	Ernest A. Nash.
*Feb.	18	Architectural Paper...	S. Austin.
March	18	Social Evening and Annual General Meeting.	

* With lantern illustrations.

East Riding.—During the past year meetings have been held at Barnby Moor, Fangles, Market Weighton, and Shipton Thorpe. People have been interested and influenced, and many have said that they have worn birds and feathers simply from want of thought. In the Honorary Secretary's own parish such a thing is now practically unknown. There are three great drawbacks: (1) The want of free lectures; (2) the need of literature; and (3) the fact that subscribers do not pay for NATURE NOTES.

Hampstead (Northern Heights).—During the past year the membership of the Branch has continued to grow in a very satisfactory manner. Such Rambles as took place in the district were well attended, and judging from this the Field Excursions evidently go a long way towards meeting a well-defined want, and are at once a pleasant method of familiarising members with the different aspects of Nature, as well as of promoting their health by the exercise entailed. In particular request in this direction has been Mr. James E. Whiting, local Hon. Secretary, to whose unique knowledge of outdoor life not only members but the local public are indebted for much useful information.

Subjoined is a list of the lectures delivered during the winter, and a hearty acknowledgement must here be made to the lady and gentlemen who were good enough to place their services so unreservedly at the members' disposal.

1904.		Subject.	Lecturer.
Oct.	20	"Forest Trees"	Prof. G. S. Boulger, F.L.S.
Nov.	21	"The Sun and Sun-Spots"	Mr. E. Walter Maunder, F.R.A.S.
Dec	12	"Pompeii"	Mrs. L. Douglas Wilson.
1905.			
Jan.	16	"In Birdland with a Camera"	Mr. Oliver G. Pike.
Feb.	6	"The Hammerer and the Camera"	Mr. Wm. Whitaker, B.A., F.R.S.
	28	Lantern Exhibition (Archæological).	Mr. R. Garraway Rice, F.S.A.
March	22	"Our Unseen Foes" ...	Dr. Macdonald Brown, F.R.C.S.

As announced in the February number of NATURE NOTES, the work of feeding the birds upon Hampstead Heath, hitherto conducted by private agency, was taken over by the Branch early in this year. Stations were selected for the distribution of food, and repeated visits to these disclosed an increasing number of birds frequenting them.

One of the stations was the Bird Shelter, and here the results would have been better if the authorities could have been induced to look properly after the enclosure. Attention has been called to this point in the local Press.

The local Committee takes this opportunity of expressing its indebtedness to Mr. M. Yeatman Woolf for the repeated facilities given to Selbornians to inspect his valuable Museum at St. John's Wood, and for the hospitality extended to his visitors. Not only does the Museum offer considerable educational advantages, but it is an object-lesson of what a private collection should be in the way of order and arrangement. The interest of the visits was enhanced by demonstrations given by Mr. Woolf himself on Termites, and by Mr. P. Macleod Yearsley, F.R.C.S., F.Z.S., on Cockroaches and Tunicates. It should be mentioned that on one occasion the local Committee had the pleasure of meeting at the Museum the members of the Battersea Field Club.

Haileybury College Natural Science Society (*Junior*).—Some very good work was done in many directions during the year, under the headings of Conchology, Entomology, Botany, and Photography. In the last section, as a rule, the prize is not given, since the photographers do not wish to illustrate anything, but only to make pretty pictures. This year, however, the prize was awarded to R. L. Yorke for some good photographs of birds' nests.

The following general meetings have been held this year :—

1904.		Subject.	Lecturer.
Feb.	8	"The Machinery of the Voice" ...	Dr. Aikin.
	29	"The Snipe and Woodcock" ...	M. Vaughan, Esq.
March	21	"The Thousand Isles"	J. Stanley Gardiner, Esq.
May	30	"Game Birds and their Enemies" ...	M. D. Hill, Esq.
June	20	"The Flight of Birds"	The President.
July	16	"Food and Feeding"	Dr. Williams.
Sept.	26	"The Motor Car"	H. F. Knight.
Oct.	17	"Holiday Experiences."	
Nov.	7	"Japan"	Paul Bevan, Esq.
	28	"The Machinery of the Animal Body"	I. C. Maclean, O.H.

In the summer term expeditions were made to Woolwich Arsenal and to the Zoo. Large numbers went to Woolwich and about twenty to the Zoo. Finances become straitened towards the end of the term, and, in general, there is a disinclination to devote money to science.

North Middlesex (*Junior*).—This Branch came into existence in July, 1904.

Mr. C. M. Hall, M.M.S. (a member of the Society), coming into contact with several young naturalists in the neighbourhood of Wood Green, thought that they would prove useful members of the Selborne Society. He applied for a warrant for the formation of a Junior Branch, which was granted by the Council on June 8 last. On July 15 the Branch was formally instituted by Mr. Hall, and on the same night a number of Associates were admitted. The work of the Branch has been very successful, especially as Wood Green is not very prolific in naturalists, and as those who join do so voluntarily.

Several very interesting excursions have been made, more especially one on August 20 last, to the Zoological Society's Gardens, Regent's Park, when practically the whole of the members attended.

Since the inauguration, the following papers have been read and demonstrations made :—

1904.		Subject.	Lecturer.
Aug.	5	"An Introduction to the Study of Fish"	Mr. Hall.
	19	"British White Butterflies"	Master Garnett Thompson.
Oct.	25	"Ichthyology"	Mr. Hall.
Nov.	25	"Popular Entomology"	Demonstration by Mr. G. Brooks.
Dec.	2	"The Life and Work of Gilbert White"	Professor Boulger, F.L.S.

The Society's collection of lantern slides was used to illustrate the lecture.

1905.			
Jan.	6	"Electricity and Animal Magnetism"	Mr. W. J. Wade (Associate).
	20	"British Freshwater Fishes"	F. E. Watkin (Associate).
Feb.	24	"Popular Errors in Entomology, especially Lepidoptera."	Demonstration by Mr. G. Brooks.
Feb.	24	"Life in the Aquarium"	Paper and Demonstration by Mr. J. C. M. Grint.
March	17	"Freshwater Mollusca"...	Demonstration by Mr. C. M. Hall, M.M.S.

The exhibits at the meetings have been of a most interesting kind, and speak well for the devotion of the Associates to their various studies. Several of the members live in other parts of the country, and the specimens sent by them from time to time have proved of the utmost value. The thanks of the home members of the Branch are due particularly to Master Frank Barlow, of Staleybridge, for the shells and other specimens from his district sent from time to time for exhibition at the meetings.

Mr. J. L. Wood deserves very grateful thanks for allowing the meetings of the Branch to be held at Brunswick Hall, and for other kindnesses shown from time to time by him.

Totnes King Edward VI. School Natural History Society (*Junior*).—During the year thirty lectures have been given to the Society on such interesting subjects as "Behind the Scenes of the Zoo," on "Snakes," and the "Aquarium," "Insect Life," and a "Devonshire Lane." Excursions are a regular feature, and prizes, too, have been awarded for various pieces of work in natural history, one of which is somewhat out of the common, namely, for "Taming of a Wild Creature." Many of the lectures are printed in full in *The Totnesian*, which contains detailed accounts of the proceedings.

SUMMARY OF BRANCH PAYMENTS.

Made during the financial year ending March 31, 1905.

Branch.	Paid for NATURE NOTES.	Contributions.
Abinger and Shere	£1 14 8	£0 10 0
Birmingham	11 5 4	3 9 0
Ealing (1903)	5 1 10	1 8 7
Farnham	1 14 8	0 17 0
,, ...	—	donation 1 10 0
Halifax	1 16 10	0 5 9
Hampstead	17 6 8	4 16 0
North Somerset	1 6 0	0 8 6
,, ,, ...	—	donation 1 15 6
Rape of Lewes (1903)	—	0 7 3
,, ,, (1904)	1 14 8	—
Richard Jefferies (1903)	0 2 2	0 2 10
	£42 2 10	£15 10 5

The Selborne Society.

Dr. RECEIPTS AND PAYMENTS FOR THE YEAR ENDING MARCH 31, 1905. Cr.

	£	s.	d.
To Balance at the Bank, April 1, 1904	215	10	0
To Sundry Receipts—			
1904 Subscriptions—Balance ... 83 12 6			
1905 Subscriptions on Account ... 136 7 11			
	220	0	5
Sale of NATURE NOTES to Branches	42	2	10
Contributions from Branches	12	4	11
Donations	5	0	11
Sale of Leaflets, Badges, &c.	1	10	6
Interest on Deposit	0	2	3
	£496	11	10

	£	s.	d.
By Sundry Payments—			
Printing and Postage of NATURE NOTES and cost of Index for the Year	132	17	2
Editor and Secretary	55	0	0
Rent	15	15	0
Stationery and Printing	19	6	3
Petty Cash Payments	19	19	3
Expense of Annual Meeting	44	15	0
Library	1	6	0
Field Club	1	1	0
Press Cuttings	2	12	6
By Contributions—			
Restoration of Selborne Church and Bells	5	5	0
South Eastern Union of Scientific Societies (2 years)	1	0	0
By Amount at Bankers, March 31, 1905			
On Current Account £184 7 6			
On Deposit Account 10 10 0			
	194	17	6
By Cash in hand	2	17	2
	£496	11	10

We have examined the above Account and the Vouchers for payments made, and certify that it is correct, and that £194 17s. 6d. is the Bank Balance on March 31, 1905.

26, THEOBALD'S ROAD,
GRAY'S INN,
April 25, 1905.

CRAIG & SON,
Chartered Accountants.
Honorary Auditors.

	£	s.	d.
Balance	197	14	8
	£197	14	8

	£	s.	d.
Liability to Members for NATURE NOTES to December 31, 1905, estimated at	125	0	0
Balance	72	14	8
	£197	14	8

SUMMARY OF BRANCH PAYMENTS—*continued*.

Made since March 31, 1905.

Branch.	Paid for NATURE NOTES.	Contributions.
Bath	£4 0 0	£3 0 0
Brighton	2 5 6	0 5 0
Clapton	4 8 10	1 1 0
Croydon	5 0 4	—
Ealing	5 6 2	1 12 1
East Riding	1 16 10	0 10 0
Rape of Lewes (1904)	0 2 2	0 6 8
Rother Valley (Midhurst)	2 6 8	0 12 0
,, ,, ,, ...	donation	1 10 0
	£25 6 6	£8 16 9

The subscriptions from the following branches for 1904 have been paid in full, and these are included under the heading of subscriptions: Kensington, Portsmouth, "Richard Jefferies," Rother Valley (Petersfield), and Sutton.

SELBORNIANA.

ORIGINAL RESEARCH.—In order that a proper return may be made to the British Association, the Council hope that any members who have been engaged in any original scientific research, or have published any such work between June 1, 1904, and May 31, 1905, will let the Honorary Secretary have a note of the subject of their investigation as soon as possible.

NATURAL HISTORY NOTES.

254. Wild Animals and Man.—Mr. A. Nicol Simpson's note on the unsuspecting squirrel in June NATURE NOTES reminds me of an experience of mine which I quite intended reporting at the time. I was standing on the foot-bridge crossing the Elwy at Cefn one day last summer, leaning with my back against the handrail, reading, when I felt something shake the bridge, which, by the way, is very old and rickety. On looking up I saw a squirrel just a few feet from me, evidently considering whether it was wise to proceed. I kept perfectly quiet, and after hesitating a moment he came leisurely forward and passed under me: he had no sooner crossed when another came along without a moment's hesitation, and, following its mate, disappeared up a tree. There is no doubt that I moved and so aroused the suspicions of the first; but the second squirrel had no consciousness of my presence.

Rhyl. F. L. RAWLINS.

255. A year or two back a stoat ran over my hands resting on a plank at the head of a lake where I was fishing. Several times a kingfisher has settled on my rod, and also a swallow.

W. A. SHAW.

256. Hedgehogs and Steel Traps.—One afternoon I saw a hedgehog alive in a steel trap, where it must have been lingering in pain and misery for hours. It being the time of year when there are young, this poor animal's family probably died of starvation.

Of all inventions for the capture of the lower creatures, none surpass the steel trap in cruelty, which through man's thoughtlessness often keeps its victim in untold agony for hours or even days. A question has lately been asked in Parliament about taking rabbits with steel traps in one of the Royal parks, which, it is to be hoped, will call attention to the matter. If it be useless to hope that these

traps will be entirely abolished, may we not look forward to the time when the law permits their employment for the capture of rats and mice only; and cannot something be done by appealing to the owners of land, and especially to our country squires? Much suffering would be stopped by ladies taking up a campaign against the abuse of these traps.

Southacre, Swaffham, EDMUND THOS. DAUBENY.
May, 1905.

257. Helping Nest-Builders.—A pair of house-martins, having taken a fancy to the angle of one of my windows, found it impossible to start their nest as the cement is too smooth for them to gain a foothold, and fixing the first pellets of mud in position is the most difficult engineering feat they have to perform. Noticing their fruitless attempts, I plastered a little mud on the place. This timely help was appreciated at once, and in ten minutes they began to work the mud into shape. As I sit at the open window reading the newspaper, with which I can reach the nest, they carry on the work. Dread of the parasitic sparrow, which threatens the existence of their race by seizing on their nests, causes these birds to seek the protection and proximity of man.

EDMUND THOS. DAUBENY.

258. Birds in Northamptonshire.—It may be of interest to mention that a pair of Golden Orioles safely hatched off five young ones in the neighbourhood of Peterborough last year. I saw a common buzzard near Market Harborough this spring, and my fellow secretary of our other (Peterborough) Ornithological Society in Northants saw a pair not long ago in that neighbourhood. We both saw some Ferruginous Ducks in the early spring, and he reports a Goshawk at Peterborough.

W. A. SHAW,
Haselbeech Rectory, Northants Nat. Hist. Soc.
Northampton.

259. The Starling and Damage to Crops, &c.—For many years I have had the shooting rights over 400 acres of farmland: my principal object, however, was to study the various species of birds nesting on it, and to photograph their eggs and young, giving them as much protection as lay in my power. Every year starlings increased in numbers, and on December 20, 1898, the farmer informed me he thought these birds were destroying his sprouting wheat. On shooting and dissecting a few, we found their stomachs contained wheat—not a few grains which might be swallowed accidentally along with animal matter, but quite a number of grains. I wrote to *The Field* asking if anyone else had noticed this habit in the starling, and got replies from Shrewsbury, Hempstead, &c., all stating that starlings had done much damage. Again, in January of this year, a correspondence started in the same paper on this subject, and the majority of writers agreed that starlings damaged sprouting wheat. I replied (*vide Field*, February 25), pointing out that starlings in this district, shot from November to January on fields of wheat, usually contain a quantity of grain, but that in my possession were several test-tubes full of noxious insects taken from their stomachs when not shot at the time of year or in the situation described above. In reference to Mr. Edmund Thos. Daubeny's note (see NATURE NOTES for June), the farmer from whom I rent my shooting got leaflets, sent to me from the Board of Agriculture, and the one on the starling included; but his faith in Government papers has been considerably shaken in consequence of his having practical proof that the starling does considerable damage to his crops at certain seasons of the year. Of course it is well known that starlings eat fruit. Sometimes we Selbornians do harm by painting bird-character in too rosy terms, and it is better with farmers (shrewd observers as a rule) to point out the good and destruction to crops done by different species, impartially weighing the evidence, which, in a very large majority of cases, shows up birds to be great benefactors to the agriculturalist.

Southsea, Hants, J. E. H. KELSO, M.B.O.U.
June 7, 1905.

260. Pied Flycatchers.—On May 20 I fixed up in an oak-tree near my bedroom window a nesting-box, which has usually been occupied by a pair of

Great Tits. For some days previously a bird, with the notes and appearance of which I was unfamiliar, had been very busy in the tree apparently in quest of caterpillars. Early on the morning of the 25th, hearing the note again, I saw this bird enter the box and immediately afterwards the female arrived, carrying nesting material, and forthwith building operations went on merrily. The fact of the box being within two yards of the window, enabled me to closely observe the colour, markings and movements of the pair, and it was only after a reference to "Bewick's Birds," I found they were Pied Flycatchers. Bewick says: "This bird is nowhere common; it is said to be most plentiful in Yorkshire, Lancashire, and Derbyshire," and, as he remarks, the white spot on the forehead is wanting in the female. As the entrance-hole in the box was only made large enough for tits, it is evidently rather a tight fit, and it is very amusing to watch the struggles of the bird with leaves, pieces of straw, &c., which are too large to pass through the hole. Sometimes the difficulty is overcome by withdrawing to a branch about two yards away, straight opposite the hole, and then taking a flying shot, by which means the object is forced through, bird and all. The male seems to take no part in the work, beyond fussing in and out of the box, and getting very much in the way. So I am the proud possessor (for the time being) of a pair of Pied Flycatchers, and I hope the safe rearing of the prospective family may do something towards decreasing the rarity of these beautiful and interesting little birds. Since writing the above one of the Great Tits has appeared on the scene, and has been summarily chased off the premises by the Flycatchers. I have, therefore, been obliged to erect another box near by, to avoid complications.

W.

261. Animals and Plants this May.—The long spell of cold, dry winds has told severely on many animals and plants. Gamekeepers say that young pheasants are dying in all directions. A brood of young wild-ducks are nearly all dead. Young chicken succumb day after day. The swallow tribe are sufferers. Sand-martins in a chalk-pit here are decreasing in numbers, and many are so weak as to be hardly able to fly. Owing to lack of insect food, many birds are driven to all sorts of shifts to provide for themselves and their families. Jackdaws are more persevering than usual in robbing little birds' nests. I have just witnessed a jackdaw take an unfledged thrush from a nest in a thick roadside hedge. His unwelcome visits are sure to be repeated till the whole brood is gone. In a garden near is a holly tree profusely covered with last year's red berries. Missel thrushes had taken to eating these at the end of May. Bees have been kept at home by the cold, thus losing many precious hours of their short honey harvest. On May 23 potatoes and French beans were cut down by frost; and even broad beans, just coming into flower, lay flat upon the ground. Much of the beauty of the foliage is ruined for the year; trees and flowers look faint and tired in the cold, parching blasts, and the sickly colour of many crops can be seen with half an eye.

Edmund Thos. Daubeny.

262. Fertilisation of the Primrose.—I have not been a disciple of Darwin's and a life-long observer of natural objects without being fully aware of the "important deductions" that will be drawn if it becomes an established fact that the primrose is "beetle-fertilised," and am so impressed with the way ordinary insect visitors of our spring flowers neglect the primrose as to feel sure that its fertilisation is almost wholly caused by other and smaller insects. During the last two springs I have kept this flower under special observation at all sorts of odd times, including evening and early night. No bees or flies with long proboscis have been seen by me visiting it by day, and no noctuæ or thick-bodied moths by night. This is corroborated by two members of my family who have assisted in the matter. The visits, therefore, of these insects seem to me to be so rare that if its fertilisation depended upon them the primrose would soon cease to exist.

In early spring only a few kinds of thick-bodied moths visit flowers, some of which are very attractive to them. One has only to go to sallow bloom at night to find the moths of the neighbourhood at the feast. In the daytime it is much the same. Bees, flies and other insects are busy on the sallow and willow bloom, while the primrose on the ground beneath is unnoticed by them.

In our gardens the flowers of the polyanthus are much frequented by bees, which sometimes fly towards a primrose near, but discovering their mistake when within an inch or two, rarely light upon it, and hardly ever attempt to probe it for honey, which is beyond their reach in almost all cases—there being only one bumble bee, *Bombus hortorum*, with long enough tongue to reach the nectar at the bottom of the tube.

If in the simple examination mentioned in last month's issue, which took me half an hour, 40 per cent. of the primroses were found to be tenanted by small beetles in the tubes, is it not reasonable to suppose that most of the remaining 60 per cent. were tenanted by them at some time or other? May it not also be concluded that these beetles cannot find their way from one end of the tube to the other without causing fertilisation, and in many cases self-fertilisation?

All the beetles found by me on April 15 were of the same kind, *Euphalerum primulæ*, of which Professor F. E. Weiss, in his article in NATURE NOTES of June, 1904, says, that "by creeping about within the flowers they become completely dusted over with pollen, and must be powerful agents in self-pollination."

"Pollination of the Primrose" in NATURE NOTES for April, 1904, has been of much help to me in trying to rob this flower of its secrets.

EDMUND THOS. DAUBENY.

P.S.—*Bombus hortorum* and other bees may often be seen flying about a beautiful bed of primroses close to my house, but they are *invariably* in quest of other flowers that grow among the primroses. I do not remember having seen *Bombus hortorum* visit a primrose.

263. Primroses.—There is a wood near here, and, I believe, another near Althorp, where white primroses are not uncommon, and some from the former locality flower profusely in my garden. Otherwise I only once remember finding a clump of white ones in West Sussex, where one occasionally finds the pink variety of the bluebell. Last year my brother picked a fine primrose here with four petals, and a sister-in-law has just told me that this spring on the same day she picked primroses with four, six and seven petals respectively in a wood in Kent. The sparrow is certainly one of the birds which plucks off the heads, apparently for mischief alone. W. A. SHAW.

NATURAL HISTORY QUERIES.

54. Scarcity of Nightingales.—Is there not a scarcity of nightingales this year? They are usually more or less abundant in this neighbourhood, but as yet I have not heard more than one, or at the most two, and that was three or four weeks ago. Other residents say the same, and it is a sad loss to the "amenities" of a beautiful district.

Possibly the so-called "sparrow clubs" are the cause. I have heard that children are encouraged to bring the heads of small birds, by no means of sparrows only, and that they receive rewards proportioned to the number brought; and a friend living six miles off tells me that the children there deliberately and systematically take the young birds of all kinds from their nests and twist their heads off.

Buxted, A. L. H.
June 5, 1905.

55. Humming-bird Hawk-moth.—On May 17 a humming-bird moth was hovering over a yellow azalea in my garden. It has not reappeared. Was it not an early visitor?

Milverton, Somerset,
June 6.

SELBORNE SOCIETY NOTICES.

[NOTE.—ALL ANNOUNCEMENTS WITH REGARD TO MEETINGS OF THE CENTRAL SOCIETY OR BRANCHES WILL BE FOUND TOGETHER AT THE END OF THESE NOTICES.]

Election of Chairman.—At the Council Meeting held on May 23, the Rev. R. Ashington Bullen, B.A.(Lond.), F.L.S., F.G.S., was unanimously elected Chairman of the Council, and Mr. E. A. Nash was chosen to fill the vacancy thus made on the Council.

Delegates.—The following is a list of delegates appointed up to the present to represent Branches upon the Council:—

Bath, Mr. John F. Davie; *Clapton*, Mr. G. H. Wattson; *Croydon*, Mr. H. S. M. Grover; *Ealing*, Mr. H. W. Ravenshaw; *East Riding*, Mr. John Hopkinson, F.L.S.; *Hampstead*, Messrs. G. H. Cottam, James Walker and Douglas Wilson; *Wimbledon*, Mr. John Hennell.

Note. The members responsible for Junior Branches are entitled to represent the Branch on the Council, but up to the present Mr. C. M. Hall, of the *North Middlesex Branch*, has alone availed himself of the privilege.

New Junior Branch.—The warrant constituting the Clapham High School Field Club Junior Branch, has been approved by the Council. Miss C. Dunham Massey is the member responsible; Miss Gwendoline Hine is the Honorary Secretary, and Miss Doris Pountney is the Honorary Treasurer.

New Members.—*Central Society.*—Miss Apted, Guildford; Miss E. Gething, Liverpool: Miss Gibb, Earl's Court; Miss Grace Stebbing, Tunbridge Wells.

Birmingham Branch.—Miss Ada Simcox, Leamington Spa.

Ealing Branch.—Mrs. Walter Davies, Ealing; Mrs. Wilfred Mark Webb, Hanwell.

Subscriptions.—The Council has great pleasure in acknowledging subscriptions of greater value than 5s. from the following members: R. E. J. Stone, Esq., £1 1s.; J. Troubridge Critchell, Esq., 10s. 6d.

Library.—The Honorary Librarian has pleasure in acknowledging the following additions to the Library: "Natural History of Selborne," Captain Thomas Brown's edition, 1834; "Natural History of Selborne," Blackie's edition (no date)—kindly presented by E. A. Nash, Esq.

The Honorary Librarian will attend at 20, Hanover Square, from 6 p.m. to 6.30 p.m. on the evenings when the Publications Committee meets (at present on the second Monday in the month), for the purpose of issuing books to members.

EXCURSIONS.

May 13.—Notwithstanding a threatening morning, a party of twenty-five, including the Honorary Secretary, joined Mr. Mühlberg's ramble to Roundabout Wood and Pett's Wood, Chislehurst. In perfect weather for walking, three hours were spent entirely in woods and on footpaths, and many were the interesting finds. *Orchis Morio* was abundant in one of the meadows, and *Orchis maculata* and *Listera ovata* were found. Water-crowfoot was in bloom in a small pond, and various water insects were recognised, whilst the song of the nightingale was heard in two or three different parts of the woods. Beside the abundance of common flowers in bloom this month, *Allium ursinum* was found by the side of a small stream; but the great find of the day was undoubtedly *Paris quadrifolia*, some specimens of which had five petals. At Mrs. Dabner's, Paul's Cray Common, Chislehurst, a delightful *al fresco* tea under the apple trees was enjoyed by all, after which the party wended their way to Chislehurst and Bickley Station. The absence of Mrs. Percy Myles, whose attendance has always been so regular, was much regretted on this occasion.

May 27.—Under perfect climatic conditions a party of thirty-seven members enjoyed a walk under the leadership of Mr. Ernest A. Nash. Field-paths and by-ways were used to the almost entire exclusion of the dusty highways, the route chosen being a circular one from Potter's Bar Station on the Great Northern Railway, *via* South and North Mimms. Over a series of fields surrounded with

hawthorns in full bloom the route lay, until at the village of South Mimms a brief halt was made to enable the party to inspect the church, which is dedicated to St. Giles, and is chiefly of Perpendicular date. There are some interesting tombs of the Frowick family of the early sixteenth century, a thirteenth-century font, a piscina and some brasses. By an old, little-used road the ramble was continued, and Hawkshead Wood entered. Emerging into North Mimms Park, a visit was paid to the church, which, like so many churches in Hertfordshire, stands in the park. It is dedicated to St. Mary the Virgin, and is an example of pure Decorated style. It contains an interesting brass of a priest in mass vestments, *circa* 1360, together with some others of fifteenth and sixteenth-century date, and there is also a large monument to Lord Chancellor Somers.

After tea at the "Old Maypole" Inn, those wishing to catch an early train took a direct footpath to Potter's Bar Station. The others proceeded by a longer and far more beautiful route.

NEWS FROM THE BRANCHES.

Ealing.—It is much to be regretted that Mr. H. W. Ravenshaw has found it necessary to resign the Honorary Secretaryship of the Ealing Branch, which he has held since 1896. Mrs. Wilfred Mark Webb has kindly undertaken to discharge the duties of the office. All letters with regard to the business of the Branch should therefore be addressed to her, at Odstock, Hanwell, W.

North Middlesex (Junior).—On May 12, Mr. Moore read a most interesting paper to the Association on "General Botany," Mr. C. M. Hall, M.M.S., occupying the chair. The lecturer dealt principally with flowering plants, taking only a cursory glance at the other groups. He illustrated his remarks by a large number of well-mounted specimens. On May 20 the members of the children's section met at Brunswick Hall. Numerous exhibits of larvæ were made by the children. Mr. Hall attended and showed a case of living amphibians and reptiles, including salamanders and tree-frogs. He also exhibited a light brown blind-worm, which had been found in a truck of peat at Wood Green. He afterwards gave a short lesson on the natural history of each exhibit, and also gave a demonstration by means of a larva of the goat moth, to show how an insect breathes, the spiracles being large and easily seen in this species.

On May 26, at the Associates meeting, Miss Grace M. Grint read a paper and demonstrated on "Land Conchology." The lecturer explained the formation of a shell, and illustrated variation of markings and colouring by means of a good collection of specimens. Mr. C. M. Hall, M.M.S., occupied the chair.

FORTHCOMING EVENTS.

Central Society.

Business Meetings.—The next meeting of the Council will be held on Tuesday, July 25, at 5.30 p.m., and the Publications Committee will meet on Monday, July 10, at 5.30 p.m.

Excursions.

Saturday, July 1.—Cassiobury Park and Gardens, Watford the Gardens by kind permission of the Hon. W. R. W. Peel, M.P.), through Whippendale Wood to Chandler's Cross. Tea at Keeper's cottage. Meet at Watford Station (L. & N.W.R.) at 3 p.m. Trains leave Broad Street, 1.45; Euston, 2.20. Cheap tickets can be taken at Euston, 1s. 9d. return. Distance, 6 miles. Return trains leave Watford 7.47 and 8.35. The Hertfordshire County Council Teachers' Nature-Study Class will join in this excursion.

Guide, Mr. W. Percival Westell, F.R.H.S., M.B.O.U.

Saturday, July 8.—Drive (cost about 1s. 6d. a head) from Chalfont Road Station to Jordans to view Quakers' Meeting House, built in 1688. Return to Chalfont St. Giles for tea (9d. each), then proceed by field-paths to Chorley Wood Station. *Book to Chalfont Road.* Baker Street (Metropolitan), 2.20; Swiss Cottage, 2.18; Finchley Road, 2.20. Special cheap tickets, 2s. return, obtainable at Baker Street Station only.

Guides, Messrs. Douglas Wilson and Geo. Avenell.

Saturday, July 15.—West Drayton and Iver. Assemble at West Drayton

Station on the arrival of the train leaving Paddington at 2.30, Ealing at 2.43. Walk, by permission, along the left bank of the River Colne to Iver Water Splash. Visit Iver Church; afterwards tea will be taken in Iver Village. Return by the right bank of the Colne to West Drayton.

The members of the Ealing Scientific and Microscopical Society will take part in this excursion.

Guide, Mr. Wilfred Mark Webb, F.L.S.

If a sufficient number intimate their intention (to Mr. Webb, at Odstock, Hanwell, W.) of taking part in this excursion, before July 10, arrangements will be made for reduced fares and reserved compartments.

Saturday, *July* 22.—Weybridge to Shepperton Lock. Waterloo, 2.28; Weybridge 3.10. The Gardens of Caneswood, formerly the residence of Dr. Lionel Beale, by kind permission of Mrs. Greet; thence by heath to the grounds of Oatlands Park Hotel and the site of Oatlands Palace (admission to Grotto, 6d., optional). Ferry to Shepperton. Tea at "Bennett's," Shepperton Lock, about 5.15. By the river-bank to Shepperton Church and Village. Frequent return trains.

Guide, Dr. Henry Willson.

Saturday, *July* 29.—Farthing Down, Chaldon and Coulsdon. Take cheap day tickets to Coulsdon, 1s. 6d. Cannon Street, 2.16; London Bridge (S.E.R.), 2.20; Charing Cross, 2.6 (passengers from Charing Cross *change at Purley*). Tea at The Fox.

Special object of interest in Chaldon Church, mural painting, "The Ladder of Salvation," twelfth century.

Guide, Mr. H. H. Poole.

Saturday, *August* 5.—No excursion. Saturday before Bank Holiday.

ANSWERS TO CORRESPONDENTS.

Rev. E. T. Daubeny.—The general opinion of experts is that the pear-blossoms you sent had had their pedicels bruised by the high winds early in May, and that the trees immune from injury were probably shorter or stouter in the stalk.

Mrs. Needham.—The cut-leaved Beech (*Fagus sylvatica*, var. *incisa*) and *Anemone sylvestris*.

Miss Wyndham.—The longicorn beetle feeding on pine-bark is *Callidium violaceum*. It is seldom possible to name any insect with certainty from a non-technical description.

Miss Roget.—"British Birds' Eggs and Nests," by Rev. J. C. Atkinson (Routledge), 1s.; "British Birds' Eggs," by R. Laishley (Lovell Reeve), 7s. 6d.

1. All communications for NATURE NOTES must be authenticated with name and address, not necessarily for publication.

2. The return of an unaccepted contribution can only be guaranteed when it is accompanied by a stamped and addressed envelope. We cannot undertake to name specimens privately, to return them, or to reply to questions by letter.

3. All communications for any number must be in the Editor's hands by the 10th of the preceding month.

4. Communications for NATURE NOTES, books for review, specimens for naming, &c., should be addressed to the Editor, PROFESSOR BOULGER, F.L.S., F.G.S., 11, Onslow Road, Richmond, Surrey.

5. For the supply of the Magazine to others than members, or for back numbers (except in the case of new members), address the publishers, with stamps at the rate of 2½d. per number, Messrs. JOHN BALE, SONS AND DANIELSSON, Ltd., 83-91, Great Titchfield Street, London, W.

6. Letters connected with the business of the Society, subscriptions, and applications for membership, should be sent to the local Honorary Secretary, or to the Honorary General Secretary of the Society, WILFRED MARK WEBB, F.L.S., at 20, Hanover Square, London, W.

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Nature Notes:

The Selborne Society's Magazine.

No. 188. AUGUST, 1905. Vol. XVI

SELBORNIANA.

Prizes for Juniors—A New Departure.—The attention of our younger readers is directed to the particulars—given among the "Selborne Society Notices" at the end of this number—of a new scheme put forward by our Council for their benefit. This is the offer for competition among our junior Members and Associates of prizes in connection with the objects of the Society. For the present, one prize of half-a-guinea is to be offered monthly, and full details as to the subject and conditions of the first competition will be found on p. 157.

Local "Zoos."—Simultaneously from York and from Cardiff suggestions reach us for the establishment of local Zoological Gardens. Given suitable space, in which the animals can be maintained in health, and adequate funds for their acquisition and maintenance, much may be said in favour of such a multiplication of our opportunities for seeing exotic animals in a living state. We fully recognise that a mismanaged zoological garden may become a repulsive exhibition of cruelty, and we could wish that a larger proportion of the inhabitants of our provincial towns devoted some of their leisure to the loving study of our native fauna and flora in their natural surroundings; but at the same time a well laid-out garden with flowers, a band and refreshments, properly constructed aviaries, stabling and paddocks, may prove something more than a mere urban promenade. We hope, however, that no town will attempt anything of the sort "on the cheap." It is essentially a case for the munificence of some wealthy citizen rather than one for doles from the rates.

The New Forest.—"A cry comes from the New Forest that certain kinds of birds are still diminishing in number in that lovely pleasaunce. Magpies, jays, and birds of the hawk tribe are becoming especially scarce, and a correspondent who

writes to a daily contemporary declares that in some of the 'enclosures' the squirrel is almost extinct. No doubt trippers, pic-nics, forest fires, and the rushing motor car do much to drive away, or destroy, the wilder and more timid species, but 'birds and animals of prey are ruthlessly exterminated by the woodmen and keepers acting under the orders of our State Bureau of Woods and Forests, because they annually rear large numbers of pheasants in the heart of the forest, and for this badger and hedgehog, falcon and hawk, owls and magpies, receive short shrift.' If this be really so, it is indefensible. There is so little wild life left in England that it is of far more importance than pheasants, and we may reasonably expect to have the New Forest kept as a preserve rather than as a breeding ground for game. There have been many complaints to the same effect, and the matter is, we fear, growing urgent."—*Estates Gazette.*

Penguins.—At the final General Meeting of the recent Ornithological Congress, it was resolved, on the motion of the Hon. Walter Rothschild, M.P., to send a telegram in the name of the Congress to the Governments of the Commonwealth of Australia, New Zealand, and Tasmania, urging them to pass legislation to put a stop to the enormous destruction of the penguins now going on in the Macquarie Islands, and other groups in the South Pacific. It appears that these birds are being killed by the million, for the purpose of being boiled down for the oil, and if their massacre is allowed to go on unchecked the extermination of the species will soon be brought about. This was the last piece of business transacted by the Congress, and it is to be hoped that the action of the members may have the desired effect.

Swallows.—At the same Congress it was decided to appeal to our Government to join the International Convention, with France, Germany, Austria and Sweden, for the protection of birds useful to agriculture, so as to influence Italy in the interests of the swallows, which at present are netted and slaughtered by tens of thousands on their migration through that country. As has been well pointed out, it is of little use to take measures for sparing birds in the northern lands, while they are so ruthlessly destroyed in the south, and only a joint effort of all countries will prevent the arrival of a time when not a swallow, but hosts of gnats, will indicate the approach of an English summer.

Stag-Beetles. — We have received the following appeal from Mr. H. D. Gower, of Croydon:—

"May I appeal to your readers, more especially those who may be teachers and instructors of lads in our public schools, to impress upon such lads the wanton cruelty of the practice of screwing off the heads of the male Stag-Beetles, an insect so well known in our home counties as to need no description.

"The so-called decapitation takes the form of an amusement, coupled with

the collecting of the horns and heads; but the fact of leaving the bodies of the insects after the operation in the by-ways and paths of our suburban and country lanes, does not add to the charm of a walk.

"A kindly word put by those in authority would, I believe, convert the poor stag-beetle into a pet, to be observed from a more intelligent point of view; or, if the insect be a pest, let it be treated as such, but without this cruel method of extermination that takes place daily during the appearance of the species."

Dress at the Opera.—"The opera management at Covent Garden regulates the dress of its male patrons. When is it going to do the same to the women?"

This question is put by Mr. G. Bernard Shaw in a letter in the *Times* of July 3. On the previous Saturday night, he tells us, he went to the opera, and wore "the costume imposed on me by the regulations of the house. I fully recognise the advantage of those regulations. Evening dress is cheap, simple, durable, prevents rivalry and extravagance on the part of male leaders of fashion, annihilates class distinctions, and gives men who are poor and doubtful of their social position (that is, the great majority of men) a sense of security and satisfaction that no clothes of their own choosing could confer.

"But I submit that what is sauce for the gander is sauce for the goose. . . . At nine o'clock a lady came in and sat down very conspicuously in my line of sight. She remained there until the beginning of the last act. I do not complain of her coming late and going early; on the contrary, I wish she had come later and gone earlier. For this lady, who had very black hair, had stuck over her right ear the pitiable corpse of a large white bird, which looked exactly as if some one had killed it by stamping on its breast, and then nailed it to the lady's temple, which was presumably of sufficient solidity to bear the operation. I am not, I hope, a morbidly squeamish person, but the spectacle sickened me.

"I presume that if I had presented myself at the doors with a dead snake round my neck, a collection of blackbeetles pinned to my shirt-front, and a grouse in my hair, I should have been refused admission. Why, then, is a woman to be allowed to commit such a public outrage?

"I suggest to the Covent Garden authorities that, if they feel bound to protect their subscribers against the danger of my shocking them with a blue tie, they are at least equally bound to protect me against the danger of a woman shocking me with a dead bird."

Extermination of Plants.—We are glad to see that several correspondents of the *Yorkshire Daily Post* have been writing to urge that something should be done to check the despoiling of the country-side, especially in Yorkshire, Lancashire, and the Lake district, by the extermination of wild ferns and flowering-plants. Special mention is made of Wharfedale, and, among the species in danger, of the *Osmunda, Ceterach* and Hart's-tongue ferns. The writers also refer to the wholesale picking of primroses, cow-

slips and bluebells, only to be thrown away. Among remedial measures suggested are appeals to school-children by the clergy before school-treats take place—and the replanting of rarities, as proposed in Mrs. Ewing's "Mary's Meadow." One writer expresses the opinion that legislation "is now quite as necessary for wild plants as it was for wild birds a few years ago," and proposes that plant-hawkers should be required to have a licence and to state where their wares are obtained. May we also suggest the use of our "Don't" cards in schools, railway-stations, tea-gardens, &c.?

'Twixt the Cup and the Lip.—There is a very true adage, "What's everybody's business is nobody's business," and this well expresses a serious danger that besets all great public efforts. A few enthusiasts do their utmost and accomplish so much that their goal seems well within reach; whereupon the rest of the general public, though they may be loud in their protestations of sympathy, fold their hands and do nothing, resting satisfied with the conviction that the object will be accomplished, because so much has been done already. We are led to make these remarks more especially by the present position of three important schemes, to all of which we have before referred, those, namely, for the acquisition of Gowbarrow, Purley Beeches, and Lightwoods and Warley Woods. The first of these is in every respect a matter of national concern. Of the £12,000 required, the National Trust has secured £7,500; but the remainder has to be collected within the next five months. The amount collected includes comparatively few large donations, *i.e.*, sums over £100, and not nearly enough small ones. Within a thirty-mile radius of Manchester Exchange there are more than five and a half million people, with nearly half a million more at Leeds, and more than that number at Sheffield and Newcastle taken together. If only each of the five and a half million contributed a farthing, or if each of the large towns which are within excursion reach of the Lake district gave £1,000, the thing would be done. In the language of the *Spectator*, "It will be a thousand pities if, after all, Gowbarrow cannot be made an open space for ever. To us one of the most attractive things about the scheme to buy Gowbarrow is the fact that the money subscribed cannot possibly do harm as well as good, as is the case with so many public benefactions. No one can be pauperised, or deprived of self-reliance, or kept idle by making the public free of the noble stretch of 'woods, waters, wastes,' sought to be purchased by the National Trust."

The scheme for the acquisition of Purley Beeches is a far smaller matter; but it should especially appeal to lovers of Nature in London; for such a piece of woodland, though it may fall only too easily before the advance of the suburban builder, cannot be replaced. Of the £5,400 required, only £1,400 has to be obtained from the general public, the parish

being ready to find the remainder; and, of the £1,400, over £200 has been subscribed, chiefly locally; but the option of purchase expires next Lady-day, so that this is practically a case of "*bis dat, qui cito dat.*"

Our readers will remember that the third scheme, that for the acquisition of Warley Woods as an open space for the teeming population of Birmingham, originated with the local branch of our Society; and, though it has now passed out of their hands into that of a more widely representative committee, our local Honorary Secretary represents us on that body. Eighteen acres of the adjoining Lightwoods Park have already been secured at a cost of £13,000, and by means of a further sum of the same amount, towards which £10,000 has been promised, this valuable "lung" can be increased to forty-five acres. The collection of the remainder ought to present little difficulty to the residents, neighbours and friends of the metropolis of the Midlands; but here, again, it is most desirable that a large number of contributors, poor as well as rich, should prove that they truly appreciate the proffered boon.

AN OTTER CUB.

IT was on the morning of March 17 last that I visited a little-frequented corner of my Stratford garden in search of early violets, and while looking about I became aware of a light sound coming from out a tangle of shrubs and ivy—a sound that was something between a whimper and a chirp. Wondering whether I was about to discover an early nest of young birds or merely a new-born kitten, I plunged into the thicket, and after a moment's search found the maker of the commotion. To my surprise, upon parting the undergrowth, I saw before me an entirely delightful otter cub, half concealed among the ivy, with little more than the blunt head and sturdy tail in view.

Exactly how the little creature found its way into my walled-in garden will, of course, remain a mystery; but presumably a recent rising of the river had invaded the lair of the family, when either the mother had carried her cub to the spot or the young had been scattered and each had found sanctuary where it could. There is an aperture under the front gate sufficient to admit a full-grown otter, and from the trampled appearance of the ivy bordering the garden, I imagine that these or other creatures have from time to time made a way for themselves through the undergrowth.

The pretty cub showed fight on being disturbed, and was certainly possessed of a few quite formidable little teeth. When left alone it closed its large eyes and seemed disposed to sleep, but snapped at any intruder or even at a stick placed beside it.

Shortly a friend arrived post-haste with two cameras and endeavoured—though vainly, as has since been discovered—to photograph the beastie in its dark lair. Next we secured the cub in a landing-net, and carried it, struggling and scolding, out into the daylight. When turned loose on the lawn the little thing moved slowly about, but appeared unable to escape on account of its feebleness. We could now see what a beautiful soft creature it was, with its curious flat head, its expressive eyes, powerful pads and well-developed tail. From the point —or perhaps it would be more accurate to say, the butt—of the nose to the tip of the tail the cub measured twenty inches, and probably it was about a month old. As it lay on the lawn we observed how slowly the creature drew its breaths; but though

Photo by T. R. Hodges.] AN OTTER CUB.

small and weak it was fierce, and when a lady friend stood beside it to prove, as she said, how tame it was, the small savage caught hold of her dress with its teeth in an instant. When the "business-end" of the animal was kept out of mischief by the net, the fur was found to be very soft, and so far as could be told, the process of stroking was by no means unpleasing to the otter itself.

The photographer having exposed all his plates, the cub was restored to its original hiding-place in quite a lively condition. On being turned loose it ran for a short distance, but when inspected later in the day was found to have returned to the exact spot where it was first discovered. In order to keep off marauding dogs, the bottom of the gate was boarded up through the hours of daylight, and a saucer of milk, together with divers small fish, provided by sympathising women-folk. During the day, in the writer's absence, the attractive little visitor appears to have held a kind of *levée*, and once at all

events it was hauled out for further inspection. By this time the creature was fast growing tame, allowed itself to be stroked, and even showed a disposition to follow people about.

At night it rained heavily and we fondly imagined the parent otter coming up from the river and crossing the road under cover of darkness to reclaim her wandering infant. Alas! for the pretty cub and our hopes of its restoration to its home beside the water! On the next morning the poor thing was found lying upon a grassy bank, a sorrowful, bedraggled little corpse. When it was too late we realised that we ought to have tried to feed our visitor with a bottle on account of its tender age and not have left it to the apparently heedless mother. But as a matter of fact the tiny creature's teeth would have rendered feeding-bottle experiments hazardous, and moreover the mother otter was so confidently expected to attend to her offspring's needs so soon as darkness fell.

All that could now be done was to pack the little body off to a taxidermist, first drying the sodden fur and restoring the lost beauty so far as was possible when once the life was out. So that, after all, the otter cub will make its abode with me, but only as the tenant of a glass coffin.

It but remains to be added that since the date above mentioned several full-grown otters have been seen quite close to Stratford; in one case a specimen was actually observed from Clopton Bridge making its breakfast off an eel upon the bank. It thus becomes fairly clear that a pair of these animals have this spring made their "holt" in proximity to the town, and one can only hope that the other infant members of the family will escape such untimely ends as that which befell my particular cub.

Stratford-on-Avon,
April, 1905.

REGINALD HUDSON.

SHELLING.

THE country is never dull (whatever may be said to the contrary) if one is able to drink in and enjoy the beauty of the flowers and butterflies, or to watch the wild animals and birds in their natural haunts. And there is another hobby which is wonderfully interesting, namely, shelling. We do not hear very much about conchology, but at least one well-known bishop, many clergy, doctors and working men, not to mention many ladies of high degree, find shell-collecting intensely fascinating. The shells are many of them so lovely and the varieties so endless that every new locality visited will yield something of interest. Shells are easily stored, they do not easily break, and the hobby has the advantage of being a cheap one.

Most neighbourhoods will produce something, and the true

lovers of Nature will be careful never to take more specimens than they really need; to pick the best examples and never to destroy an immature or worn shell, or to endanger a habitat.

After all, by collecting carefully and preserving the colonies; by replacing any grass or moss we have moved, we are only depriving thrushes and many other birds, mice and several animals, beetles, and parasitic insects of their extra luxuries in life. Of course many shells may be picked up empty and there is no need of killing the animal, but where this has to be done let it be done by plunging them into absolutely boiling water. Then death is instantaneous and the animal can be at once extracted (whilst the water is quite hot) *à la* winkle, with, say a hat-pin, or a vaccination needle.

Where shall we look for shells? Well, as a rule, peaty and sandy grit soils, pine-woods, commons of bracken, and igneous rocks are not much use for exploring. Limestone and chalk districts are, however, always productive, and clay in parts. Search under fallen branches and stones in moist and shady places, in nettle-beds, on mossy or ivy-clad hedge banks, on old walls, and at the roots or on the trunks of beech trees, for the land shells; whilst for the water shells the most likely spots are reservoir sides at low water, the underside of stones in shallow streams, the rejectamenta of rivers after floods and the sand-banks of eddies.

Collect in the spring, before the new lip of the shell is formed, or in the autumn when the young shells have grown theirs. The best times for hunting are after or during rain. To learn the special characteristics of the species and their varieties it is best to see some really good private collection, or to visit a museum. At South Kensington, where the bird-lover is charmed with the really magnificent cases of British birds, one is by no means satisfied with the collection of British shells. They are in an extreme corner of a room leading off the bird gallery, and the varieties are locked up out of sight, pride of place being given to a world-wide collection, which is not very interesting, because non-British. At Northampton or Newcastle things are managed better; but the really good museum-collections are few.

One cannot expect, or hope, to get all the species or varieties by one's self, many of them being extremely local, but by exchanges a very valuable collection can be put together and a delightful correspondence with other collectors started.

If we look at the "thrush altars," the broken shells of *Helix nemoralis, arbustorum*, &c., will soon show what varieties are in the near neighbourhood. These varieties are by themselves well worth studying—the absence, or presence, or combinations of the typical five bands being very varied—also the colouring, pink, yellow, brown, white or lilac, in *H. nemoralis* or *H. hortensis*.

Some varieties are quite rare, *e.g.*, 00300 of *H. hortensis* (though it is common in *nemoralis*, the black-mouthed species), or 12300 00005 in both. Those with translucent bands, again, are not common, but very beautiful, whether in *H. virgata, hortensis caperata*, or *cricetorum*.

There are 127 sorts, eighty-two land and forty-five fresh-water, in the British Isles. "Land and Freshwater Shells of the British Isles," by Rimmer, sold by Watkins and Doncaster, 36, Strand, is the best book to begin with, as it is simply written, and one is not bored by the nerves and other anatomical parts of the animal in diagram and detail: it is also well illustrated.

We all know that the Romans used to eat snails and had special silver spoons for the repast; also that in Paris many tons of *H. pomatia*, *aspersa*, &c., are consumed daily during the season, the snails being reared in country farms.

I have known snails and slugs eaten in England as a cure for consumption amongst the poor. Necklaces made of shells are worn. In some parts of Ireland and in the West of England the boys have pushing matches, much in the same way as we fought with walnut-shells in our preparatory-school days. If, perchance, you have inquisitive spectators at any time, tell them what you are looking for, and the idea that you are mad will wear off, both with young and old.

A few weeks ago the writer was in a charming Northants village, searching for *H. rupestris* on the old wayside wall on a Saturday morning. Soon a knot of a dozen children were attracted by the bending form, and the larger boys stood at my elbow, intent, but dumb. "Well, children, I am looking for shells for my school-children's museum: bring the others, and help me, will you?" The ice was broken: yes, they had seen shells in their gardens, and soon brought me examples, and they were quite keen in discovering what I had come to seek. At one o'clock they moved off home for luncheon, and the smallest, a golden-haired boy, said in explanation, "My mummy has got my dinner ready, sir." Then, touched by that feeling of sympathy which makes us kin, and looking from my dusty cycle to my face, he sweetly said, "Didn't your mummy give you any dinner to-day?" I had to confess she did not (being 140 miles away), but my housekeeper had provided a liberal supply of oaten biscuits, and these were shared with my useful little helpers, and supplemented by the sweets of the village shop. I have promised to see them all again. On another occasion I had seven stalwart quarrymen to help me all the afternoon: the limestone digging was left entirely, but they were keenly interested in the new form of exercise. In a word, shelling brings one into lovely hamlets far from the beaten tracks—it gives the school-children, at any rate, many a joyous outing—whilst the selected shells, neatly arranged in their partitions, somewhat like those for birds' eggs, bring back memories of many happy days. W. A. S.

REVIEWS AND EXCHANGES.

To Selborne for a Holiday. By E. B. N. Guildford. Woodbridge Press. Price 1s. net.

Though modest in tone and appearance, this dainty little brochure amply fulfils the promise of its title. In 35 pages it tells simply and sympathetically of the home of Gilbert White, and how to reach it. The Church, the Wakes, the Plestor, and the Hanger are briefly described in turn and a few words are added on the environs. No doubt, by the way, need have been expressed as to White's having planted the three lindens opposite the Wakes ; whilst the modern name of the "Wishing Stone" has misled the author, as it has many of his predecessors as to the antiquity of this "obelisk," as the naturalist might have called it. The book is beautifully printed on good paper with wide margins and rough edges and a neat wrapper, whilst eight excellent process reproductions of exceptionally good photographs, printed on "Art" paper, render it a cheap as well as a serviceable pocket guide for the pilgrim to the shrine.

Animals I have Known. By Arthur H. Beavan. T. Fisher Unwin. Price 5s.

By "animals" the author means "mammals," and more than half his volume is devoted to our British species, wild and domestic, the rest dealing with Australasian and South American forms. Though there is rather too much hunting, trapping, and killing in the book, and its size permits but a few brief notes on each species passed in review, there is a good deal of interesting information, obtained by personal observation, scattered through its pages. The illustrations, of which there are forty, are not of a very high order ; but, no doubt, the volume will form an attractive present for boys.

Wasps, Social and Solitary. By George W. Peckham and Elizabeth G. Peckham. With an Introduction by John Burroughs. Archibald Constable and Co. Price 5s. net.

In a most interesting review of this volume in the *Daily Chronicle* for June 30, our President points out that the main result of the laborious researches of the authors is to check and supplement the memorable work of M. Fabre, especially as regards instincts, so as to demonstrate the existence in these characters of a large amount of individual variation. Those of us who have read the popular works on this subject by M. Fabre and Lord Avebury, or have heard Mr. Enock lecture on this topic, cannot fail to enjoy this attractive record of most painstaking work.

Observations sur les Guêpes. By Charles Janet. Paris : C. Naud. 1903.

The eighty pages of this memoir, supplementing the author's work issued in 1894-5, are full of detailed research, dealing with the hornet and seven other species of wasp, with special reference to their nests and combs. The gradual transformation of circular into hexagonal cells here described must interest all students of the "Origin of Species."

Observations sur les Fourmis. By Charles Janet. Limoges : Ducourtieux and Gout. 1904.

Dealing mainly, but not exclusively, with *Myrmica rubra*, this is a most important contribution to our knowledge of the details of the anatomy, physiology and life-history of ants. The first part treats mainly of the sense-organs and stigmata, the second of such topics as the formation of new colonies, the duration of the various metamorphoses, the nuptial flight, the feeding of ants when under observation, and the presence of nematodes in their nests. The work is a continuation of many previous contributions to our knowledge of insects from the same pen, and is illustrated by seven excellent plates.

Description du Matériel d'une petite installation scientifique. 1re Partie. By Charles Janet. Limoges : Ducourtieux and Gout. 1903.

This pamphlet of 36 pp., with seven plates, is a detailed description of the methods adopted by the author in exhibiting a college collection of fossil invertebrates at Beauvais, giving full measurements and other particulars of cabinets, drawers, cases, trays, labels, &c., which should be of considerable interest to museum curators.

Wayside and Woodland Blossoms: a Pocket Guide to British Wild Flowers. (First Series.) By Edward Step, F.L.S. With coloured figures of 127 species by Mabel E. Step. Warne and Co. Price 6s. net.

Mr. Step has already established his position as a popular expositor of natural history and the present work has in previous editions been widely welcomed. Coloured plates—even crudely coloured plates—are helpful to many beginners: the author has reduced technicalities to a minimum; and includes descriptions of 394 species. The two volumes, of which the complete work is to consist, might certainly balance one another in two ordinary jacket pockets; but it is a pity that the species could not have been arranged in scientific sequence. Miss Step's drawing is sometimes excessively stiff, and the colours, as reproduced, would seem to us often calculated rather to mislead than to assist the student.

A School Flora for the Use of Elementary Classes. By W. Marshall Watts. New Edition. With 174 illustrations. Longmans. Price 3s. 6d.

This abridged descriptive flora of common flowering plants and pteridophytes was first issued in 1878, and was revised and reprinted in 1887. By the use of nineteen initials, the species found in the neighbourhood of as many public schools are indicated. The publishers have now added plates, most of which are made up of the inimitable drawings from Le Maout and Decaisne; but the text remains unchanged; so that, in addition to the original drawback that attaches to the use of any incomplete flora, the school-boy is given an obsolete nomenclature, that of the *London Catalogue* of 1886.

The Homeland Handbooks: Lynton, Lynmouth and the Lorna Doone Country. Price 6d. net. *Horsham and St. Leonard's Forest.* Price 1s. net. *Huntingdon and the Great Ouse, with St. Neot's and St. Ives.* Price 1s. net. *Reigate and Redhill.* Second Edition. Price 6d. net. The Homeland Association.

Of this excellent and extremely cheap series of guide-books as a whole, including, as each of these volumes does, the ordnance map of the district, we can only emphasise the words of praise which we have used on previous occasions. We are not surprised to find that local authorities are gladly adopting them as "official," and we look forward to the appearance of many other volumes, so that they may practically describe the whole of our Homeland. Much interesting biographical and archæological matter is given, local sports are not omitted, and our "Dont's for Picnic Parties" appear in every volume; but we could wish that room could be found for more natural history, such as the "exposures" likely to interest the geologist and a mention, without precise localities, of the more important birds, insects, molluscs or plants. More space might, perhaps, have been given to the Sussex Iron industry, and its connection with the "hammer" ponds, in the Horsham volume, and we rather expected to have seen pictures of the gate-house of Blechingly Place and of the Godstone Almshouses, in the Reigate and Redhill guide. Cromwell is, of course, the main interest of Huntingdon, as is Lorna Doone and her creator, Richard Blackmore, of Lynton; but in the volume on the former, in addition to notes on angling, a list of rare plants is given. Mistakes seem very rare in these valuable little books, a few letters misplaced in the scientific names to which we have just referred, and "Macleary" for "Macleay," on p. 91 of the Reigate guide, being all we have noticed in our necessarily rapid perusal.

Annuals. By T. W. Sanders, F.L.S. Agricultural and Horticultural Association. Price 1d.

This neatly printed pamphlet is No. 2 of the "One and All" garden books. It runs to 32 pages and contains many illustrations, so that it is phenomenally cheap, and its contents are trustworthy.

Sportsman's Map of the Dominion of Canada. Canadian Pacific Railway.

This map, on the scale of 100 miles to the inch, has the names of the various game mammals, birds and fish printed across the various districts in red. We do not know to what game birds the name "chicken," which appears on the Northern United States, may apply.

Mother Dormouse and other Poems. By Geraldine Seymour. David Nutt. Price 2s. 6d.

The seventeen sets of slight verse contained in this daintily printed and bound volume appear to have been written to accompany illustrations in a child's magazine. Without illustrations they are not worth preserving.

The Nature-Study Review for May is a distinct advance upon the two preceding issues. Among the articles of real value and interest which it contains are Flower-shows in City schools, Observation Bee-Hive for the Schoolroom, Window Gardens for the Schoolroom, A Wild-Flower Garden, Making a School Lawn, and The Time Required for Nature-Study.

A Pathfinder's Pocketful of Jog-trot Rhymes. With Sketches by "Chum." R. E. Taylor and Son. Price 2s. 6d. net.

We confess we prefer the "Pathfinders" in prose. This neatly got-up pocket volume contains a good prose ramble from Epsom to Tadworth, *viâ* Ashstead, together with much verse, mostly "humorous." One inoffensive little lyric begins

"O, come to the fields,
To the Spring-time sun,
When Nature awakes, awakes!
With the advent of Spring
Her work has begun;
Each bud from its bondage breaks,"

and, after similar invitations to summer lanes, autumn woods and winter moors, concludes—

"O, come to the groves,
Where the song-birds sing!
True joy will ever be found
—In Winter, in Summer,
In Autumn, in Spring—
With Nature the whole year round."

The "A. L." Nature Calendar. Compiled by J. T. Houghton, F.E.S., Leeds. E. J. Arnold and Son. Price 4s. 6d. net.

This is a set of twelve monthly sheets, measuring 27 inches by 24½, mounted back to back on six stout boards and eyelcted. The chief mammals, birds, fishes, beetles, flies, butterflies, moths, flowers, ferns, mosses, lichens and fungi found during the month are enumerated under English names in bold type, their scientific names syllabicated and accented as a guide to pronunciation being also given. There are hints on garden and farm work, and on the January sheet a good list of books for teachers. Rarities are not included. The work has been carried out under competent supervision, and, from the specimen sheet we have seen, appears thoroughly accurate and admirably adapted for use in schools of all kinds. The same publishers send us specimens of what they term "'The A. L.' Nature-Study Observations," twelve sheets 20 inches by 12 inches, mounted on a lath and ruled for daily observations. These are 2s. net per set.

The Manual of Horticulture for 1905, issued by Messrs. Kelway and Son, Langport, Somerset, is a trade catalogue at its best. It forms a handsome large quarto volume of 360 pages, fully illustrated from photographs taken, in many cases, from plants growing in their Langport nurseries. It is mainly devoted to perennials, whether hardy or "greenhouse," and contains much useful information as to culture.

Received: *Proceedings of the South London Entomological and Natural History Society*, 1904-5; *Third Annual Report of the Horniman Museum*; *Bulletin of the New York Botanical Garden*, vol. iv., No. 12; *The American Botanist* and *The Plant World* for April and May; *The Amateur Photographer* for May 9; *The Victorian Naturalist* and *Bird-Lore* for May and June, and *The Parents' Review* for June; *The Naturalist*, *The Irish Naturalist*, *The Animals' Friend*, *Our Animal Friends*, *The Animal World*, *The Humanitarian* and *The Estate Magazine* for June and July; and *Nature-Study*, *The Humane Review* and *The Agricultural Economist* for July.

NATURAL HISTORY NOTES.

264. The Woodchuck (*Arctomys monax*).—Writing from Byron, Michigan, U.S.A., a correspondent says, "We have had woodchucks which were quite tame and very amusing. The last one we had wanted to sleep in the clothes-press, next to my bedroom, and would carry or drag along whatever he could to that room. We usually see plenty of woodchucks in the summer. Many of them have holes in the ground, and about sundown the old ones will come out to feed on the clover. If they hear a slight noise they will sit up like the rabbit, look around, then dodge quickly out of sight. When taken young the woodchuck is very easily tamed; and, like the squirrel, when consuming its food, will use its paws for holding the same.

37, *Alwyne Villas*, CHAS. E. J. HANNET.
Canonbury, N.

265. Squirrels.—Squirrels are a trouble to me. I do not mind their taking my nuts regularly every autumn, but do not know how to keep them off my strawberry bed, for netting does not stop them, and I do not like to use a gun. They have even begun to attack small unripe plums. An old coffee tin cut down the side with the bottom and top removed, and fastened round the trunk three or four feet up, will prevent them climbing up the plum trees.

EDMUND THOS. DAUBENY.

Southacre, Swaffham,
July, 1905.

266. Plover Chasing a Stoat.—On June 1 we were walking on a road above the Irthing Valley, in North-east Cumberland, when our attention was attracted by a common plover (locally *Peeweep*) circling about and screaming. We thought at first that we were the object of her attack, but my daughter, looking over the wall, saw that she was trying to drive away a stoat. Frightened partly by her efforts and partly by the sight of us it made off at full speed.

E. H.

267. Ringed Plover.—The ringed plover here, whose first lot of eggs were boiled and eaten, had, at my request, their second nest spared, and it was shown to me. There are now three young birds flying about with their parents; so the chances are we shall have them back again in the same spot next year.

EDMUND THOS. DAUBENY.

268. Are Starlings Friends or Foes?—The writer of Note 259 thinks I give starlings too good a character. He gives them too bad an one. *Inter alia*, he says: "Of course it is well known that starlings eat fruit." Let me own at once that they are fond of cherries. What other fruit do they eat? In the course of my life I have had three homes of my own, with good kitchen gardens, and an ample expanse of lawn. In each case several pairs of starlings lived on the premises with the same results. They spend hours every day in thrusting their bills into the turf on the lawn in search of food, and ignore my kitchen garden. Thrushes, blackbirds and sparrows are caught in the netting that protects my gooseberries, currants and strawberries, peas and the like, but no protection whatever would be needed if starlings were the only birds that lived on my premises, for I have no cherries. Starlings find the following food in the turf: cockchafers and their grubs, the June bug (*rhizotrogus*, or root-eater), which just now flies about in swarms, lepidoptera and their larvæ that feed on the roots of grass and plants, wire-worms, click beetles, and other coleoptera, daddy-long-legs, leather jackets, and many other terrible enemies to the cultivators of land. It requires more than ordinary knowledge of entomology to fully appreciate the starling's worth. The amount of grain eaten by it is very small and it can hardly be considered granivorous. If I were to draw up a list of useful birds in order of merit the starling would take a high place, for its good deeds far outweigh its bad ones.

EDMUND THOS. DAUBENY.

269. Green Sandpiper.—The nest of this bird has not, I believe, been hitherto found in England, and yet there is a strong presumption that they do

nest with us. A fallen tree in the duck decoy 200 yards from my house is a favourite resort where green sandpipers have been under observation for the last six years. They leave us, presumably to nest further north, about May 15, and usually return with their young after two months' absence. One was seen at Euston Park on June 24, and on July 5 one flew over my house at a great height. It is quite possible that these nested in England.

July, 1905. EDMUND THOS. DAUBENY.

270. Joint Nesting.—A swallow's nest has been occupied by a pair of swallows and spotted flycatchers at the same time. How they managed the sitting part of the business I cannot quite make out. The owner of the house where this occurred says it was most curious watching the four parents feeding their young.

One spring a scrimmage went on in some rough grass several mornings in succession, opposite the windows as we were at breakfast. This was caused by a hen pheasant turning a partridge off her nest and laying an egg in it. After a time we removed the pheasant's eggs and handed them to the gamekeeper.

July, 1905. EDMUND THOS. DAUBENY.

271. Successive Occupancy of Nest.—In a honeysuckle on the wall of this garden there is a nest, built this spring by a pair of thrushes who have recently reared their brood in it. In this abode two pied or water wagtails (sometimes known as "dishwashers"), after carefully "redecorating" it with a new lining of hair, have established their home, and are now busily engaged in feeding their young family. I should be glad to know if this is a common occurrence with this species of birds, as I do not remember having before seen an instance of it. I have read that the cuckoo is fond of selecting a wagtail's nest in which to deposit its eggs, but in this case the victims seem to have learnt from the enemy, although they have shown more consideration by waiting until the residence was vacated by its previous tenants.

Summerdale House, Chichester. WILFRED BAILEY.

July 3, 1905.

272. The Spotted Flycatcher.—This pretty summer visitor has, from my earliest knowledge of it, had a very great fascination for me, its habits are some of the most interesting met with among birds, and as great numbers of them visit this country, we may watch for him from the month of May with every prospect of success. In size and shape it greatly resembles the sand-martin, being slender and having a long forked tail, and a very large head in proportion to its body. Its bill is thin and sharp, and well adapted for its mode of life, as will be seen later on. Above, and on the head it is grey-brown, while its breast is grey with several small brown specks, and grey on the underparts. To add to the resemblance to the sand-martin, its legs are very short, and when it perches on a fence or the branch of a tree, they are bent close to the body and are almost invisible. Its haunts are well-wooded gardens on the outskirts of towns, shady lanes, or clearings in woods, surrounded with trees and undergrowth of dense bushes. Commonly distributed all over the southern part of our island, I have seen him frequently on the outskirts of London, and very commonly in a lane near Brighton, bordered by a fence, and a hawthorn hedge, and overhung with young oaks and tall pine trees, making a fine shady avenue, and a typical haunt of the bird.

Walking along this lane early one morning in August of last year, appreciating the faint odour of the pines, I noticed a spotted flycatcher fly from the fence into the road to snap up a passing insect, and it struck me as being a likely spot for this pretty visitor. Accordingly, I went out in the afternoon to the same spot and counted as many as twenty birds on the fence, all actively engaged in fly-catching. They sit quietly on a fence, with eyes keen on the surroundings. Presently a fly passes and the flycatcher darts from the fence and finishes up his short flight with a graceful sail, and then the fatal snap, and very rarely indeed misses his aim. It is a very pleasant sight to see a pair thus engaged on a warm summer afternoon; they will fly to and fro the fence for hours, if not disturbed, and as they are very bold, they can easily be observed.

An extremely interesting trait in their character is their tender solicitude for

their young. The nest is built in a great variety of places, though most often among ivy against a wall. The three I have seen were at Farliegh, Addington, and Brighton, respectively. The first was among the ivy growing over an old oak trunk, and the others were on the side of a tree; the bark in one spot had been stripped away, and below this it was loosened from the trunk. In the crevice between the bark and the trunk the birds had built. It is constructed late in May or early in June, and is a neat structure composed of moss and wool, and lined with hair and wool; it is usually decorated on the outside with grass or the dried leaves of trees. The eggs are three or four in number, the ground colour is white, with a few small pinkish spots. It is when the young are hatched that the parental care is best shown. At Farleigh I saw a pair of these birds feeding their young with flies. The nest was placed on a stem of ivy growing against the trunk of an oak tree, and both the cock and hen were in constant motion. The three youngsters received visits at intervals of three or four minutes. In another instance, at Brighton, the three youngsters were a little older, and were almost ready to shift for themselves. The parents were catching flies, not only for themselves, but also for their young; they were making rather more display than the others on the same fence, and challenging all comers with a "tack-tack." From an ash tree in the neighbouring garden came a continuous shrill whistle, not bold or loud, but rather feeble. This was from the youngsters, and by watching I found three of them on a bough, high up in an ash tree. Both parents fed them very frequently, and they eagerly opened their mouths, showing the yellow interior; the old birds made approximately three visits every two minutes. Although so careful and attentive to the wants of their young ones, the spotted flycatcher would do well to exercise a little more care in their movements around the nest. On two of the occasions I have found the nest I was led to it by the parents. The old birds are so bold and self-confident, that if an observer keeps quiet for five or six minutes near to where a pair are practising their art, it is quite likely that he will be rewarded by being shown the way to their rest.

JOHN E. S. DALLAS.

273. Scarcity of Nightingales.—In answer to the query from Buxted, as to the scarcity of nightingales this year, I think the scarcity is probably only local, as they have been more than usually abundant in this neighbourhood. Is it possible that the persistently inclement weather which we experienced last spring influenced the migration of some of our summer visitors, so that many of the birds which would have proceeded inland, had the weather been less unfavourable, settled down in sheltered places near the coast.

It would be interesting to have some more notes on this subject from places near the coast and also from inland stations in order to compare them. The wood warbler is also more plentiful than usual here.

Arundel, Sussex. W. S. CLEATHER.

274. Honey-dew.—I should like to support Mr. Peter Hastie's view as to the honey-dew on maple and lime trees. I have watched these trees for several years and have frequently hunted for the supposed authors of the mischief, but in vain. I have, however, noticed that these copious discharges of honey-dew are coincident with bad flowering years. They appear to me to indicate a pathological condition due to the natural outlet for the sugar through the flowers being impeded. This has been a splendid flowering year for the great maple (sycamore) and there is every indication of a good flowering year for limes, so I shall be able to test further the application of this theory.

Stepney Borough Museum. K. M. HALL.

275. Mr. Peter Hastie may be interested to know that on hot days I have noticed the upper surface of the leaves of Japanese anemone to be glistening with honey-dew when no aphides were visible after a minute search. I have also found the upper surface of lime leaves to be covered with the same glistening, sticky substance which, as a small child, I liked to lick. I am sure there are no aphides (to speak of) when the leaves are in this condition, and it is not always, if ever, found on leaves of plants which are infested with these plagues. I think that this substance exudes from the leaves in too rapid transpiration, and is not caused by insects, though doubtless they take advantage of it.

27, *Nassington Road, N.W.* L. E. ROBERTS.

276. **A Fine Old Thorn.**—At Wortwell Hall, Norfolk, close to the River Waveney, there stands in the garden an old hawthorn tree, the trunk of which, at four feet from the ground, measures six feet seven inches in circumference. Though no doubt a very old tree it is still healthy, and has this season made vigorous growth. At about six feet from the earth a large arm has been sawn off nearly equal in bulk to a third of that of the trunk at that height, and the tree has in its time suffered various other serious mutilations. It is, however, more remarkable for height than girth of trunk, and towers far above the tops of the chimneys of the old Hall. The lower part of the trunk is partly decayed, but not to such an extent as to interfere with the flow of the sap.

Blaxhall, Suffolk. G. T. Rope.

NATURAL HISTORY QUERIES.

56. **Creepers.**—I hear of a creeper that has reared its young in a swallow's nest. Is not this very unusual?

Edmund Thos. Daubeny.

57. **Chameleon.**—I have a chameleon. Can any of your readers kindly give me hints about managing and feeding him?

Cheviot House, Berwick-on-Tweed. F. M. N.
July 12, 1905.

58. **Are Holly Berries Poisonous?**—In "Flowers of the Field," by Johns, it is said, "The berries, it should be borne in mind, are poisonous." To what creatures are they poisonous? In hard weather missel-thrushes often appropriate holly trees by driving away other birds, and do not cease to keep guard till they have eaten all the berries. On these they live and thrive for weeks at a time.

Edmund Thos. Daubeny.

[Holly berries are certainly not poisonous to birds, but on human beings they have purgative and emetic effects, which justify some caution against eating them. "Poisonous" is a vague term.—Ed. *N.N.*]

SELBORNE SOCIETY NOTICES.

[Note.—All Announcements with regard to Meetings of the Central Society or Branches will be found together at the end of these Notices.]

OBJECTS OF THE SOCIETY.

To promote the study of Natural History. To preserve from needless destruction such wild animals and plants as are harmless, beautiful, or rare. To discourage the wearing and use for ornament of: (1) The skins and furs of such animals as are in danger of being exterminated; (2) the skins and plumage of such birds as are not domesticated. To protect places and objects of natural beauty or antiquarian interest from ill-treatment or destruction. To afford facilities for combined effort in promoting any of the above or kindred objects.

Annual Dinner.—It was decided by the Council at the Meeting held on June 27, that an annual dinner should be held in November in London, at a cost not exceeding 5s. per head. Any members desirous of being present should communicate with the Honorary Secretary. Further particulars will be published from time to time in Nature Notes.

Prizes for Junior Members.—The Council has decided to offer a prize of half-a-guinea each month, for the time being, to be competed for by members of Junior Branches (Associates of the Selborne Society) and young members. Details of the first competition are given below.

At the meeting of the Council held on July 25, the following members who were present kindly promised prizes in this connection: The Rev. R. Ashington Bullen (2); A. Holte Macpherson, Esq. (3); Mrs. Douglas Wilson; C. M. Hall, Esq., and C. M. Mühlberg, Esq. The Honorary Secretary would be pleased to hear from any members desirous of contributing others.

Regulations for the First Competition.—A prize of half-a-guinea, offered by the Chairman of Council, will be awarded for the best illustrated records of continued observations on an animal, or a plant, or on the relations between the two, made during the summer holidays, by an Associate (member of a Junior Branch), or by an ordinary member of the Society, under twenty-one years of age. All essays (written on one side of the paper only), illustrations or specimens (which latter must not involve the destruction of any rare creature), should be clearly labelled with the name, address, and *age* (which will be taken into consideration in making the award) of the competitor, and should be in the hands of the Honorary Secretary of the Selborne Society, at 20, Hanover Square, W., by the 20th of September, 1905. All parcels to be securely packed and endorsed on the outside "First Competition."

For particulars regarding the formation of Junior Branches in schools and elsewhere, as well as of ordinary membership, application should be made to Wilfred Mark Webb, Honorary Secretary, 20, Hanover Square, W.

New Members.—*Central Society.*—Miss Astbury, Kew; Dr. Robertson, Wimbledon; Samuel Willson, Esq., Wimbledon Park.

Brighton Branch.—Captain Dowan, Brighton; the Rev. George, Mrs. and Miss Yonge, Hassocks.

Ealing Branch.—F. McNeil Rushforth, Esq., Ealing.

Hampstead Branch.—R. E. Avery, Esq., West Hampstead; Mrs. Louisa Auchinoole, Hampstead.

Subscriptions.—The Council has great pleasure in acknowledging a subscription of greater value than 5s. from the following members: William C. Stapledon, Esq., £1 1s., West Kirby; George A. Macmillan, Esq., 10s. 6d.

Leaflet.—A leaflet by Dr. William Martin, M.A., on the law relating to the protection of ancient monuments and buildings, has been published by the Society. Copies can be obtained from the Honorary Secretary, post free for 1½d.

Illustrated Prospectus.—A new illustrated prospectus has been prepared. Branch and District Honorary Secretaries, or others requiring copies for distribution should apply to the Honorary Secretary, who will send a specimen to any address on the receipt of a penny postage stamp.

Library.—The Honorary Librarian has pleasure in announcing the following additions to the Library: "White, Gilbert, Natural History of Selborne" (edited by Edward Jesse), 1870; "White, Gilbert, Natural History of Selborne" (edited by J. E. Harting), 1875—kindly presented by E. A. Nash, Esq. "Country Gentleman's Estate Book, 1905—kindly presented by the Editor."

The Honorary Librarian will attend at 20, Hanover Square, from 6 p.m. to 6.30 p.m., on the evenings when the Publications Committee meets (at present on the second Monday in the month) for the purpose of issuing books to members.

NEWS FROM THE BRANCHES.

Bath.—Mrs. Allon Tucker, of 9, Green Park, Bath, has succeeded Mr. W. C. Elwood as Honorary Secretary of the Bath Branch of the Selborne Society.

Brighton.—On the invitation of Mr. J. Eardley Hall and Mrs. Blackburne, the members, with some friends, visited Barrow Hill, Henfield, on June 17.

The garden was originally planted by the notable botanist, William Borrer, grandfather of the present owner, and contained at his death, on the computation of his gardener, examples of 6,600 species of plants. The collection has not been maintained in its entirety, or anything approaching to it, but there still remains an abundance of interesting and beautiful trees and plants.

In the course of the afternoon a meeting was held under a lime tree on the lawn. Mr. J. L. Otter presided, and in his introductory remarks referred to the ardour of Mr. Borrer in his favourite pursuit; how he would, when travelling, often make diversions of forty or fifty miles in a post-chaise to the reported habitat of a variety; or, in later days, observing from the window of a railway carriage some plant of interest would, regardless of the object of his journey, take a train back from the next stopping station to find and examine it. In three successive years he journeyed from Henfield to Westmorland, to enquire into the accuracy (which he doubted) of a local guide who professed to be able to lead tourists to a habitat of *Cypripedium Calceolus*. In the end Mr. Borrer demonstrated the guide's error, or fraud. Mr. Borrer's powers of discrimination were of a rare nicety, as his labours amongst the highly variable genera *Salix*, *Rubus*, and *Rosa* prove. To many forms within these genera he gave a specific rank which has not been maintained. He had, indeed, a tendency to multiply species far beyond what would now be thought warrantable. But he lived in a pre-Darwinian age, when specific distinction, as indicating a particular, isolated act of creation, gave specific determination a peculiar value and importance; and its pursuit, consequently, an attraction which it no longer possesses. The value of his observations is not diminished.

Miss M. Robinson, of Saddlescombe, then gave a pleasing account of certain plants of the neighbouring Chalk formation which had come under her notice this season. She brought a number of specimens (plucked, we may be sure, with a due regard to Selbornian principles), and they included examples of *Senecio campestris*, *Salvia pratensis*, *Linaria repens*, and *Atropa belladonna*.

Dr. Treutler expressed the thanks of those present for the hospitality of Mrs. Blackburne and Mr. Hall. It was one of the objects of the Society "to afford facilities for combined effort," and this had been pursued by them in a wholly delightful manner.

Ealing (Brent Valley).—On Saturday, July 8, a general meeting of the Branch was held under particularly pleasant conditions. An opportunity was taken of visiting the Bird Sanctuary, which has been maintained by the Branch for the last three years. Tea was taken in the woods, and was a most successful function. Afterwards a business meeting was held, at which Mrs. Wilfred Mark Webb was unanimously elected Hon. Secretary and Treasurer for the ensuing year. The Committee was also re-elected with certain alterations and additions, and a financial statement made. After a ramble through the wood business was resumed. Mr. R. H. Read gave an account of the way in which the wood had been improved since the Society first took an interest in it, and dwelt at some length on the birds found in and around it. Mr. F. McNeil Rushforth, Hon. Secretary of the Ealing Scientific and Microscopical Society, was elected a member, and the meeting terminated with votes of thanks, including a special one to Mr. H. W. Ravenshaw, proposed by Mrs. Percy Myles, for his services as Hon. Secretary to the Branch, which have extended over many years.

North Middlesex (Junior).—On Saturday, June 10, the Branch and adherents had a very pleasant ramble at Cheshunt, Mr. W. J. Wade (Associate) acting as guide. Many objects of natural history were noted, especially the fauna of the old River Lea and its banks. After tea, catered for by Mrs. Wade, the party visited the "Great House," formerly occupied by Cardinal Wolsey. They examined the old paintings which the hall contains, also Queen Elizabeth's harpsichord, Charles I.'s rocking horse, the Cardinal's chair, the ancient wooden organ, &c. The old dungeons and underground chapel were also visited.

The children's section still progresses in a marked manner, and numbers now upwards of forty members. Miss E. M. Grint (Associate), the Secretary of the section, has charge of its organisation, and the success which has attended the venture is principally due to her efforts.

EXCURSIONS.

June 17.—The weather was very unpropitious for our annual pilgrimage to Newlands Corner. Nevertheless, sixteen members braved the rain and were rewarded with a lovely afternoon, the rain leaving off soon after we left London and only returning for a few minutes while we were passing through the beautiful grounds surrounding Onslow House. On reaching Newlands Corner we found that the storms of the morning had cleared the air of all dust, and the panorama of the thickly wooded Surrey valleys enclosed by the distant hills was exceptionally fine. After a pleasant tea taken under the trees at Newland's Farm we leisurely wended our way back to Clandon Station. Although no special botanical finds were made, the more common but no less beautiful flowers were found in great profusion; in particular were the wild rose trees smothered in dainty bloom. The route has been so often described in NATURE NOTES that details of it are now needless.

June 24.—On Midsummer Day about thirty members left Guildford station for a ramble to Compton, under the guidance of Mr. E. Chapman. The Hog's Back was climbed by the old road, now grass-grown, which affords glorious views both north and south. The road is of great antiquity, possibly pre-Roman, and was used by Henry II. on his pilgrimage of penance to Canterbury. Descending the southern slope of the hill by a fieldpath, the party entered the ancient lane at the edge of Loseley Woods, which is generally held to have been the Pilgrims' Way. This brought them past the village pottery founded by the late G. F. Watts, R.A. Turning towards Compton Village, the wonderful Cemetery Chapel, built and adorned under the supervision of Mr. and Mrs. Watts, delighted everyone. Tea was taken on the lawn of the village coffee-house, and then the parish church was visited. Mr. Chapman claimed that it was almost certainly the most interesting church in Surrey, and drew attention to the tower (probably Saxon), to the anchorite's cell on the south wall, and to the so-called leper windows. Passing to the interior the varied Norman decoration, the ancient woodwork, the Easter sepulchre, and other points of interest were noted, and above all, the feature for which the church is famous, a vaulted sanctuary, with a chapel above containing a piscina, showing that in mediæval times there were actually two altars at the east end, one over the other. The ramble concluded with a saunter through Surrey lanes to Farncombe Station, where a hearty vote of thanks was passed to Mr. Chapman.

July 1.—Although there was very heavy rain in the morning, a party of thirty (including several members of the Herts County Council Teachers' Nature-Study Class and their Lecturer, Mr. A. E. Burgess, F.R.H.S.) met Mr. Percival Westell, F.R.H.S., M.B.O.U., at Watford Station. A move was at once made for Cassiobury, the seat of the Earl of Essex. The house is at present tenanted by the Hon. W. R. W. Peel, M.P., and through his kindness the party were —under the able guidance of Mr. Dean, the head gardener—permitted to visit the gardens and grounds. A tour through "The Wilderness," a charming wooded walk, consisting mostly of Scots firs, revealed quite a profusion of plants of the Yellow Balsam (*Impatiens parviflora*). Amongst the many interesting objects seen may be mentioned two Tulip-trees in beautiful blossom, Red and other Cedars, cut-leaved and copper Beeches, giant *Delphiniums*, and a bed of the new tobacco plant, *Nicotiana Sanderæ*. After a hearty vote of thanks had been passed to Mr. Dean, the party rambled across Cassiobury Park to Whippendale Wood, crossing the River Gade and the Grand Junction Canal *en route*, and proceeding along a most beautiful avenue of lime trees, planted about 1680, now in full bloom. Through Whippendale a most gorgeous array of foxgloves could not escape attention. In the more open country St. John's Wort, Wood Sage, Centaury, Enchanter's Nightshade, and other wild flowers were recorded as in bloom. Arrived at Lord Clarendon's keeper's cottage, "The Firs," Chandler's Cross, the party found tea awaiting them prepared by Mrs. Bamford. After tea a vote of thanks was passed to Mr. Percival Westell for the arrangements made, and the party then made their way along shady, well-wooded lanes, past Grove Mill, where the waterfall was much admired, and so on to Watford Station.

FORTHCOMING EVENTS.

Central Society.

Business Meetings.—The Council will not meet during the month of August, but the members of Publications Committee will assemble as usual on the second Monday in the month, August 14, at 5.30 p.m.

Excursions.

Saturday, *August* 5.—No ramble. Saturday before Bank Holiday.

Saturday, *August* 12.—Ramble on Walton Heath. Meet at Tadworth Station, 3.15. Trains leave Charing Cross (S.E.R.) 2.12, Cannon Street 2.12, London Bridge 2.15 (S.E.R.) *Change at Purley*. Return tickets, 2s. 2d.
Guide, Mr. Matthew Hunt.

Saturday, *August* 19.—Northwood, Eastcote, and Ruislip Reservoir. Take return tickets to Northwood (1s. 6d.), Baker Street (Metropolitan), 2.16. Tea at the "Black Horse," Eastcote (10d. each). Distance, 5½ miles.
Guide, Mr. Ernest A. Nash.

Saturday, *August* 26.—Uxbridge and Denham. Travel to Uxbridge by trains leaving Paddington at 2.30 p.m., or Baker Street (M.R.) at 2.20. Fare in each case 1s. 6d. Meet at electric tram terminus, Uxbridge, at 3.20, and visit the "Old Treaty House and Crown Inn" (admission 2d. each), where a short paper will be read. Proceed then, by fieldpaths if fine, to Old Denham Church, where Selbornians will be received by the Rector, the Rev. R. H. Lathbury, M.A., who will deliver an address. Tea at the "Swan Inn," Denham, at 1s. per head.
Guide, Mr. George Avenell.

Saturday, *September* 2.—Ramble round Oxshott and to the Black Pond. Meet at Oxshott at 3 p.m. Take cheap return tickets to Oxshott, 1s. 7d. Trains, Waterloo 2.15, Clapham Junction 2.27, Surbiton, 2.47.
Guides, Mrs. Percy Myles and Mr. Hubert Poole.

ANSWERS TO CORRESPONDENTS.

Severn.—Mr. Charles D. Head's address is 26, Dornton Road, Balham, S.W.

1. All communications for NATURE NOTES must be authenticated with name and address, not necessarily for publication.

2. The return of an unaccepted contribution can only be guaranteed when it is accompanied by a stamped and addressed envelope. We cannot undertake to name specimens privately, to return them, or to reply to questions by letter.

3. All communications for any number must be in the Editor's hands by the 10th of the preceding month.

4. Communications for NATURE NOTES, books for review, specimens for naming, &c., should be addressed to the Editor, PROFESSOR BOULGER, F.L.S., F.G.S., 11, Onslow Road, Richmond, Surrey.

5. For the supply of the Magazine to others than members, or for back numbers (except in the case of new members), address the publishers, with stamps at the rate of 2½d. per number, Messrs. JOHN BALE, SONS AND DANIELSSON, Ltd., 83-91, Great Titchfield Street, London, W.

6. Letters connected with the business of the Society, subscriptions, and applications for membership, should be sent to the local Honorary Secretary, or to the Honorary General Secretary of the Society, WILFRED MARK WEBB, F.L.S., at 20, Hanover Square, London, W.

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Nature Notes:

The Selborne Society's Magazine.

No. 189. SEPTEMBER, 1905. Vol. XVI.

SELBORNIANA.

A Proto-Martyr.—Will anything reach the heart of the woman of fashion? We have been putting before her for years the cruel death by starvation which she inflicts upon the fledgling birds left orphaned by her insistence upon her self-adornment with stolen plumes. Few women who wear aigrettes can now plead ignorance; but, with their eyes open, the cruelty continues. Now this fashion has cost a human life, has left a young wife a widow and her two little children orphans. The law has done what it can in Florida to protect the egrets, and in May, 1902, Guy Bradley was appointed by the National Association of Audubon Societies as warden in Monroe County. He was always found alert and faithful in the performance of his duty, willing to undergo any hardship to protect the birds, and proud when he could report an increase in their numbers. At the beginning of the year, however, he knew that the plume-hunters, whose nefarious traffic he did much to stop, had sworn to take his life; and now the threat has been carried out. While making an arrest at a rookery on Oyster Key on July 8, Bradley was shot dead. One can only repeat the comment of the current issue of *Bird Lore*: "A home broken up, children left fatherless, a woman widowed and sorrowing, a faithful and devoted warden, who was a young and sturdy man, cut off in a moment, for what? That a few more plume-birds might be secured to adorn heartless women's bonnets. Heretofore the price has been the life of the birds, now is added human blood."

Liverpool Kyrle Society: Flower Branch.—We wish once more to call attention to the useful work done by this Association, which requires more active assistants. Boxes of wild flowers, or of those from gardens, are sent to the head teachers of elementary schools in poor districts of Liverpool, to be used either for educational or for decorative purposes, either once a fortnight, or occasionally. Country workers are specially cautioned not to gather rarities. Those willing to assist should communicate with the Honorary Secretary, Miss J. L. M. Bird, 4, Riversdale Road, Aigburth, Liverpool. We wish our other large cities were provided with a similar organisation.

The National Trust.—We have recently alluded to the efforts which are being made to secure Gowbarrow Fell and Aira Force and Purley Beeches for the public, to the endeavours to protect the beauties of Snowdonia from railway vandalism, and to preserve the Whitgift Hospital at Croydon from being "improved" off the face of the earth. The chief points of interest, besides these, in the recently issued Report of the National Trust for Places of Historic Interest or Natural Beauty are the successful defence of Deadwater Eyot at Windsor, of the ancient walls of Berwick-upon-Tweed, and of the Palace Gatehouse at Maidstone, the failure to preserve the Wordsworth Houses at Penrith from local bumbledom, and the proposed acquisition of the old Market House at Winster in Derbyshire, and of Barrington Court, near Ilminster, Somerset. The former of these, partly of "Early English" date, is virtually secured, only £80 being now required for needful repairs; whilst the latter, the shell of a very fine Tudor house, which has been described as one of the glories of Somerset and has been bought for £10,500, can be acquired by the Trust when £1,500 has been subscribed, an anonymous donor having offered £10,000 towards its purchase and repair. We hope soon to hear that the £80 required for the Winster Market House, the £1,500 for Barrington Court, and the balance of £4,700 for Gowbarrow have all been received, for in no way can the beauty and historic interest of our land be more securely preserved in perpetuity than by the operation of the National Trust.

New Lungs for London.—With the constant and rapid growth of the metropolis, it is a subject of congratulation when some percentage of its enormous area can be secured as green open spaces. After a nine years' struggle, One Tree Hill, Honor Oak, was finally secured at the beginning of last month at an expenditure of about £7,000. Of this, £1,000 was contributed anonymously, through the Commons and Footpaths Preservation Society, and the remainder has been found by the Camberwell Borough Council. An oak was planted near the stump which marks the position of the original "Oak of Honour" under

which Queen Elizabeth was entertained. Almost simultaneously with this dedication, the Chairman of the London County Council had the pleasant duty of declaring a park of more than thirty-two acres at Upper Clapton, and another of about twelve acres at Hither Green, open to the public. The former of these, Springfield Park, formerly comprised three large residential properties and will be an immense boon to the crowded borough of Hackney, in which it is situated. It has cost nearly £40,000, half of which has been provided by the County Council, £15,000 by the Hackney Borough Council, £1,000 by the Stoke Newington Borough Council, a like sum by T. K. Bros, Esq., the owner of the estate, £250 by the Bethnal Green Borough Council, and £210 by the Skinners' Company, the balance being raised by subscriptions. Mountsfield Park, Hither Green, is for the benefit of this new district of Lewisham, the population of which has grown in ten years from 2,000 to ten times that number, and the Borough Council is contributing a portion of the cost, which works out at about £1,000 an acre. We do not believe that in ten years' time any one will regret these expenditures.

The Horniman Museum.—Of the educational work of the London County Council nothing is more valuable, nothing is better done than the management of the Horniman Museum at Forest Hill. In two respects it is, we believe, unique, at least in London, viz., in the systematic organisation of course after course of museum lectures, and in the extensive exhibition of living animals in vivaria and marine and fresh-water aquaria. Most of these animals are British, having been collected by the Naturalist of the Museum, to a considerable extent in the immediate neighbourhood of Forest Hill. The marine portion of the aquarium alone now comprises fourteen tanks; but besides the anemones, corals, echinoderms, mollusks, crustaceans and fishes usually seen in such collections, many types of insects, amphibians and reptiles are exhibited in a living state. We are glad to see from the Report, which we have just received, that over 200,000 persons visited the Museum during 1904. East London is to some extent provided for in this direction by the Bethnal Green Museum, and perhaps even more so by the Essex County Museum at West Ham and the Stepney Borough Museum; West London possesses the great National collections, the cosmopolitan character of which detracts in some measure from their educational value; but North London is sadly deficient in this important means of teaching.

Telegraph Poles at Hindhead.—The Post Office authorities have been reported to be about to carry overhead wires from Thursley, up the Portsmouth Road, round the Devil's Punchbowl, to Hindhead. Many public and private bodies in the Haslemere district have, of course, protested, calling upon Lord Stanley either to lay the wires underground or to take them

by some other route. No doubt the Postmaster-General, in accordance with the undertaking he gave to the recent deputation, in which the Selborne Society took part, will do his best to spare this beautiful piece of country.

FUR-BEARING ANIMALS AND THEIR POSSIBLE EXTINCTION.

By Charles Maurice Mühlberg.

IN response to several enquiries made to the Selborne Society, as to whether there are any fur-bearing animals in danger of becoming extinct through being hunted for their skins, I am glad to be able to state that, according to my knowledge, based upon thirty years' experience in the fur trade, none of these animals are in danger of extinction at the present moment.

Speaking generally, the number of nearly all the large animals usually hunted as game by sportsmen, such as the Buffalo, Musk Ox, Bear, Lion, Otter and Beaver, appears to be decreasing. The Lynx and the Leopard may perhaps be exceptions.

For the protection of the Buffalo, the Government of the United States has made special laws, and Canada has done the same for the Beaver. In the province of Ontario the killing of the latter is prohibited altogether.

Fur Seals have been diminishing in number for the last twenty years. For the protection of these, ten years ago, the United States enacted laws, still in force to-day, which entirely prohibit the entry into United States territory of any skins of Seals killed at sea, in the Behring Sea or North Pacific. Into the United States there may, therefore, be imported only the skins of Seals killed on land on the Prybilow Islands, the Lobos Islands, the Copper or Commander Islands, and the few that are obtained off Cape Horn and Australia. A further diminution can only be averted by an international agreement among the nations concerned, and although these are many—Russia, the United States, England, Japan, and others—I still hope that one day this agreement will come about.

The Chinchilla has had the attention of the South American Government turned to it of late. The killing of the Opossum was prohibited by Tasmania a few years ago.

The Sea Otter, the most beautiful representative of its tribe, unfortunately has not shared the protection of the Fur Seal. The hunting of this animal, so highly prized for the great value of its skin, has been carried on indiscriminately, with the result that in 1904 less than 400 skins reached the London market, whereas only seven years ago (1897) over 1,200 were imported, and much larger quantities in the year before that.

In the case of Lions the decrease is very marked indeed. Whereas in former years a number of fine adult Lions' skins with full black mane were brought to London and elsewhere, say twenty-five to fifty skins yearly, now such skins are offered so rarely that prices from £100 to £200 are often reached.

A few of the wild animals formerly hunted for their skins have been bred in recent years more or less successfully in captivity within restricted areas, or on special farms, viz., the Buffalo, Silver Fox, Blue Fox, White Fox, Mink and Skunk.

Concerning the annual toll of the royal Tigers, Leopards and Snakes taken in British India, an interesting fact has been brought to light by the recent statistics. It appears that the number of these animals caught was, curiously enough, just about the same as that of the human beings who were killed by them. There is, of course, the unavoidable decrease brought about by the spread of civilisation, and the consequent cultivation of forests and vast regions, formerly uninhabited.

In conclusion, it may be said that, of the large number of fur-bearing animals known to commerce, there appears to be at present no species of which serious shortages are anticipated in the near future. This, happily, will continue if the protective legislation already existing in several countries is maintained, and perhaps extended to the animals specially referred to above.

The Council of the Selborne Society, during the many years that the writer has been a member of it, has always been ready to give its attention and support to the different movements in this direction. All those interested may be assured that the present Council is now, more than ever, closely watching everything that pertains to the protection of wild animals and plant life.[1]

THE GEOLOGICAL POSITION OF EOLITHS.

"THE true nature of these flints has been the subject of some controversy, for though their tertiary age is generally conceded, it has been urged that the apparently intentional chipping has been produced by purely natural agencies."—Charles H. Read, in "A Guide to the Antiquities of the Stone Age in the Department of British and Mediæval Antiquities."

"In the Prestwich collection . . . . are three specimens, labelled by Prestwich 'Palæolithic implements found with plateau gravel specimens, Shoreham, Kent.' The question, therefore, as to whether the Eoliths are natural flints made by

[1] This article, which has been written at the request of the Council by Mr. C. M. Mühlberg, one of its members, will be reprinted for circulation as a leaflet.

man, or artificially made tools, is of no special importance." —Professor Boyd-Dawkins, in *Man*, April, 1903.

In the above quoted passages we have statements by two acknowledged authorities upon the question of the geological position of Eoliths. In the first instance we are told that their tertiary age is generally admitted, whilst in the second Professor Boyd-Dawkins maintains the reverse, and apparently wishes to establish the contemporaneity of Palæolithic and "so-called" Eolithic types, which if substantiated means the destruction of the claim that Eoliths represent evidence of pre-Palæolithic man in England.

Lord Avebury, whilst admitting that Eoliths show evidence of man, nevertheless regards them as representing "the ruder implements of the Palæolithic period."

The three statements may be thus condensed: (1) Tertiary age generally admitted: human origin doubted. (2) Contemporaneity of type of Eoliths and Palæoliths: human origin of Eoliths denied. (3) Eoliths an early form of Palæoliths, human origin admitted. Statements emanating from acknowledged authorities command, of course, the utmost consideration, and it is probable that to many the opinions taken singly would find wide acceptance. It is only when they are placed together and found to be mutually destructive that a close scrutiny becomes imperative and the necessity of meeting the objections apparent.

Into the human origin of Eoliths it is unnecessary to enter, as the question is now not only practically decided, but every day gains fresh adherents. Number 2 may, therefore, be our starting point. Professor Boyd-Dawkins bases his objection on the three specimens in the Prestwich collection; but it is difficult to understand the conclusive nature of the argument, as the Kentish Shoreham lies almost in the base of the Darent Valley, on the 100-feet level, although to the east and west of the village the land rises rapidly to the 500-feet contour. At the summit of these valley-slopes there occur spreads of gravel containing Eoliths of the type found in the pits sunk by Mr. Harrison at Terry's Lodge and elsewhere. At the same time their rolled condition proves them to have travelled a considerable distance, possibly brought down by the Darent, when that river ran at a far higher level. Now with these rolled, stained and scratched implements there are also undoubted Palæolithic implements, but with the all-important difference, that they show neither stains, scratches or rolling, presenting, in fact, those well-defined edges and sharply flaked surfaces so pleasing to the eye of the collector. From their fresh condition it is evident that these Palæolithic implements still occupy approximately the area in which they were used, namely the 450-feet contour: their fairly constant occurrence at that elevation shows, perhaps, that the height at which the rivers then ran is some 350 feet above the present course of the Darent.

This will show the vast denudation which has taken place

since Palæolithic times. If, however, we go back beyond the Palæolithic period, we may justly assume that the implements of those earlier times will show not only ruder design, but also evidence of the conditions through which they have passed, and this claim is readily admitted by the objectors to Eoliths. In other words, we must try to establish an intermediate group connecting the typical Eoliths and the undoubted Palæolithic implements. This type is apparently present in the Shoreham district, as there occur implements showing very rude chipping but little flaking, and marked by scratches which *may* be the effect of glaciation. The implements referred to are not stained, or only slightly so, and occur almost exclusively at or about the 450-feet level: when they occur at lower levels, their position is then obviously due to the action of rivers and torrents in eroding their channels. On broad grounds it may be laid down that the higher the elevation, the older the implements; and therefore when the summits of the hills are reached we find that in the material there deposited only the rudest types exist. These remarks apply broadly to the surface finds, but when sections are made then the rude types are found unassociated with any implement of true Palæolithic type. It is claimed that such an association of types exists in the pit dug at Ash; but this we may state, that Ash is some distance north of the escarpment, and therefore within the influence of later drainage from the higher land near the escarpment. If we require plateau evidence, it is obvious that only pits sunk on the highest part of the plateau can be admitted in deciding the geological position of Eoliths. But even admitting the "Palæolithic implements found with plateau specimens," it is hard to grasp their importance as detracting from the age of Eoliths, since a gravel deposit at lower levels only illustrates the *latest* time at which the river ran, its materials being gathered from higher, and therefore earlier, ground.

Thus the gravel at Green Street Green contains both Eoliths and early Drift types, a fact only illustrating that the Eoliths are present as derivatives, and that the river ceased to denude the land at an early period in Palæolithic times.

That the Eolithic types are on evolutionary grounds the forerunners of the Palæolithic forms is, of course, undoubted; but on the same grounds they are also the forerunners of Neolithic types. What we maintain is that geologically, Eoliths are separated from Palæolithic types by an immensity of time, and that between them comes an intermediate type, difficult indeed to prove, as all times of transition are necessarily short. These intermediate types show distinct attempts at flaking, wherein they approach Palæolithic implements, whilst still retaining the Eolithic edge-hacking; and by their scratched surfaces show signs of the severe usage they have undergone, in which they approach the condition of the plateau group. That the scratching and grinding processes took place after the

period of chipping is shown by the numerous cases in which the scratches overlie the worked surfaces. The fact that these intermediate types occur only on lower levels, 400 to 450 feet, serves to show that as a group they are later than those occupying a more elevated position.

An intermediate type of implements is obviously necessary if we are to fully maintain our claim that the still earlier Eoliths are geologically widely separated from the Palæolithic types. It is highly probable that these implements occur in other districts but have not yet received the attention their importance deserves.

To sum up the general characteristics of the two types, the following features may be mentioned:—

Eoliths.—Stained, sometimes heavily rolled and often scratched, edges hacked, and flaking almost entirely absent. Position when in place of deposition: 500 feet O. D. and upward.

Intermediate Group.—White, or only slightly stained, rarely rolled, much scratched and often ground down at the prominent surface angles; strigil shape, rare; edged, chipped and hacked, tongue-shaped implements approaching some of the early Drift implements from the valley gravels. Position: on lower ground than the plateau group, although, owing to denudation, sometimes accompanied by the earlier examples.

J. Russell Larkby.

AMONG THE BUTTERFLIES AND FLOWERS OF MAJORCA.

IT may be safely predicted, I think, that in a very few years the enterprising wielder of the net, or even the possessor of a vasculum, will find no corner of Europe in which his activities have not been already anticipated.

I once heard a great scientist boast that he had never "consciously" collected anything in his life, and I thought what a joyless existence he must have led!

Be that as it may, here we are, on this 1st of June, 1905, three of us, in these classical islands of the Mediterranean, and we may be "mere collectors," or we may be members of the exalted biological hierarchy, or a blend of the two—all that is certain is that, as far as may be practicable in the very limited time at our disposal, we intend to learn what we can of the Flora and Lepidoptera of Majorca.

We selected this island, in preference to either of the others, not only because it is by far the largest of the group, but because the mountains are much higher, the Puig Mayor de Soller being nearly 5,000 feet, whilst the Toro in Minorca is only a little over

1,100 feet, and altitude is a fact to be reckoned with in the distribution of species.

We approached Palma by way of Barcelona, the steamers from that port having a better reputation than those from Marseilles, and the transit occupied only about twelve hours. As we neared the capital, over a glassy sea and under a cloudless sky, the first object to arrest our attention was the picturesque old thirteenth century stronghold, Castle Bellver, perched high on the rocks above the bay, with the long, undulating limestone sierra to the north for a background. At the east end of the bay lay the harbour, flanked by the white houses of the town, rising tier upon tier up the slope, and dominated by the fine old Gothic cathedral, the white stone of which it is built mellowed by age and the hot rays of the sun into the colour of old gold. After a ramble through the quaint old streets and into the immediate environs of the town, where the high state of cultivation rendered the net superfluous, we spent the rest of the day in making preparations for our start into the interior on the morrow.

I do not propose here to dilate upon the Phanerogams of the island beyond a bare mention, as they occur, of the most prominent species, because the chief floral expert of our party, Mr. W. E. Nicholson, can, and will I hope, deal with them to much better purpose elsewhere. At Palma I will only mention the Caper (*Capparis spinosa*), which festoons a long reach of high wall beneath the Cathedral with its lovely white flowers.

As regards the Butterflies or Rhopalocera little or no information, as far as we can discover, has ever before been published on the subject.

Professor Poulton, in the accounts of his visits to the island in 1900 and 1901 (*Entomologist's Monthly Magazine*, September, 1901, and *Transactions of the Entomological Society of London*, 1904, p. 591) is ominously silent. In a superbly illustrated work in two volumes, by the Imperial Archduke who owns the villa called Miramar, there is a chapter professing to deal with the Natural History of the islands. In this Lepidoptera are dismissed in one brief sentence, which, literally translated, runs as follows: "Hordes of gorgeously coloured butterflies may be seen soaring above the tops of the highest trees." It sounds quite tropical, and we began to have visions of a spectacle entirely new to our comparatively prosaic Continental experience. The Flora, however, is treated more at length, but with such obvious disregard for accuracy as largely to discount the value of the above rhapsodical statement regarding the butterflies, and our expectations began to assume a neutral tint. This was only intensified by a visit to Father Fernando Moragnes y de Manzanos in Palma. This earnest student of Nature showed us a very extensive collection of Hymenoptera, Diptera, Coleoptera and Mollusca, and, when we asked to see his butterflies, with a shrug of the shoulders he intimated that they were so few and

uninteresting as to be not worth even the small space required to display them. With this far from exhilarating information we set out, in the usual ramshackle two-horse conveyance, on our rambles. Our first halt was at Miramer, after passing through Valdemosa, famous in recent years for that romantic episode in the lives of George Sand and Chopin, during which the latter composed that wonderful Prélude in D flat major.

The situation of Miramar, on a slope of thick woods and olive groves, with the rocky coastline stretching away for miles on either side, and the boundless ocean in front, is as picturesque as it is possible to imagine. We collected here industriously for two hours on some waste ground sparsely planted with olives, and down towards the coast, where the arborescent *Euphorbia dendroides*, its flowers now in a moribund condition, covered the rocky slopes with an orange and rose-coloured mantle.

The only insects collected here were *Pieris rapæ*, *Colias edusa*, *Pararge ægeria* and *Megæra*, *Chrysophanus phlæas*, *Lycæna astrarche* and *icarus*, the latter very abundant.

After this disappointing result we were glad to escape from the glaring sun to an umbrageous retreat in the grounds, dispatch a frugal lunch and hasten on, through romantic scenery, to the prosperous little town of Soller. Here we put up at the Hôtel de la Marina, and started early the next morning on a patch of waste ground close by, where *P. rapæ*, *P. ægeria* and *L. icarus* were excessively common; then on the road to the Port, two miles away, in the dried-up bed of a stream with coarse herbage, olives, oranges, lemons, pomegranates and other trees on either bank, with here and there great tufts of *Scirpus Holoschœnus;* and finally, for two or three miles up the direct road to Palma. Here again disappointment dogged our steps: Nicholson, moreover, climbed to the top of the Puig Mayor, but saw nothing that we had not seen below, and the only additions to our list at Soller were *Pyrameis cardui*, *Epiniphele jurtina*, var. *hispulla*, *E. Ida* and *Cyaniris argiolus*.

A curious thing observed here was that a great number of the butterflies had sharp chips taken out of the wings, and as this was more noticeable on the waste tract close to the hotel, where the little brown lizard abounded, there can be little doubt who the culprit was—the more so as one of our party had caught him in the act in Corsica.

The summit of Puig Mayor was covered with a perfect network of that most singular plant *Smilax balearica*, with its stunted, tangled, leafless branches—a sort of witches' broom, not to be confounded with *Smilax aspera* lower down, nor this, again, with the so-called Smilax used for decorative purposes at home, which is not a Smilax at all. *Helleborus lividus* also occurred here in some abundance, and *Astralagus Poterium*, *Calycotome spinosa*, *Juncoides Forsteri* and that curious endemism *Rubia balearica*.

At the Hôtel de la Marina we were made most comfortable by the active little host and his daughters, and the cuisine left little to be desired. The oranges, though small, were the most delicious I ever tasted. It was a refreshing change from the oppressive splendour and high charges of the Grand Hôtel at Palma, and the cost was only 6 pesetas (3s. 9d.) a day. One striking feature of the town, which we did not notice to the same extent elsewhere, was that, as you walk along the streets, you look through the wide open doors of every ground-floor into a large hall, scrupulously clean, set round with low wicker chairs and tables for the reception of guests; and at the other end of this cool grey vestibule you see, framed, as it were, in the open doorway, a picture of quite dazzling radiance—geraniums and pink roses, Opuntias just bursting into bloom, and perhaps a scarlet pomegranate, or an Ipomæa, or a rich purple Bougainvillea falling carelessly over the garden wall, and you think there may be some connection between these æsthetic surroundings and the innate courtesy and good nature of the inhabitants.

After two pleasant days here we drove back by the shorter route to Palma to get our letters and replenish our scanty wardrobes.

The Olive zone on this road extended to nearly 2,000 feet, and then we zigzagged on for about another 700 feet to the top of the pass—a region where, although jagged limestone cliffs dominated the scene, *Pinus halepensis*, *Quercus Ilex* and *Ceratonia Siliqua* (the Carob tree) still maintained a sturdy footing. A little lower down a striking object was the giant grass *Ampelodesmos tenax* (of the *Elymus* type), with its grand plumose panicle towering up to a height of 7 or 8 feet, and the long bare stalks of *Asphodelus albus*, now gaunt and withered; while the spaces between the rocks were filled with *Pistacia lentiscus*, *Juniperus Oxycedrus*, *Myrtus communis*, *Cistus albidus*, *monspeliensis*, and, more rarely, *salvifolius*, the exceedingly beautiful and widely spread *Hypericum balearicum*, many species of *Euphorbia*, and countless small flowering plants and shrubs—a veritable paradise for the botanist.

Here and there the crannies of the rocks were covered with a dense mantle of the tiny *Arenaria balearica* and *Sibthorpea africana*, accompanied—wherever there was any moisture—by the graceful foliage of *Adiantum Capillus-Veneris*.

The next morning, June 6, we went by train and carriage through Inca to the College and Oratory of Nuestra Señora de Lluch, where for two days we occupied the pilgrims' cool quarters in the monastery, and served our apprenticeship as housemaids.

We walked out to the Gorch Blau—a steep, narrow, rocky gorge four miles away—collecting as we went. And here, we thought, where the bramble and various aromatic shrubs and plants had established a good foothold on the dry, rocky banks,

insect life must surely abound; yet once again we returned home with the now customary barren result. Just before reaching the Gorch Blau our eyes were gladdened with the sight of that lovely pink endemic, *Digitalis dubia*.

Hence, the next afternoon—after leaving a contribution for the Church with the custodian of the monastery and settling up our modest account at the Fonda in the courtyard—we put our baggage on a mule and set out over a wild, rocky pass for Pollensa, a picturesque, but rather dirty, old town, ten miles away, and within three miles of the coast, where there is a small port. The quantity of loose stones on this road carried our thoughts back to the Classical slingers (ballistarii) of our school-days, for which the island was renowned. The practice of the art no longer exists, although the sturdy build of the natives suggests that it might easily be taken up again on an emergency.

Our last four or five miles lay through a broad, highly cultivated valley, and here an incident occurred which illustrates the genial courtesy and hospitality of the native.

In the train between Palma and Inca I got into conversation (through the medium of Italian) with a middle-aged individual whom I judged to be a small farmer. He hopped out of the train at Inca to make a bargain for us with the man who was to drive us to Lluch, gave us his address near Pollensa, hoped we would call there on our way, and rushed back to the train again. To our surprise, when we asked for his house, we were shown what might well be called, for these parts, a "Palacio," to which we ascended by a flight of steps on to a broad terrace, and, on being announced, were at once welcomed, in hearty English fashion, by our burly friend of the train. He appeared to be the possessor of a large estate, and then and there conducted us over the gardens and grounds immediately surrounding the house. Here, for the first time, we saw water. The torrent itself rushed along, out of sight, in a deep ravine, but it fed a pretty fountain in the garden, in the centre of which a stone nymph seemed to be oozing at every pore. His dependents—men, women and children—were swarming all over the place, and while he sent a woman to strip a standard apricot of its fruit, he showed us over the capacious and well-appointed house, down to a luxurious lavatory with all the latest appliances. Then fruit and wine were produced on the terrace, now in shade, followed by coffee and some wonderful cognac, seventeen years in bottle. Before parting he filled all our pockets with apricots, and we left him with the impression of having fortuitously fallen upon a very fine example of Mallorcan hospitality and bonhomie.

The name of this gentleman is Senor Don Antonio Jaume Nadal, and his address, Can Serra, near Pollensa. At Pollensa the Hôtel Bestard exemplified the truth of the adage that "things are not always what they seem," for certainly nothing

could be less promising than the gloomy and somewhat grimy aspect of this hostel, but on the first floor we were shown into a spacious salon, in which the first thing that caught the eye was a piano with a violin resting on the top of it, and a 'cello not far away. This gave promise of a form of entertainment for which we were not at all prepared; and indeed, as we indulged in the post-prandial coffee and cigars, the two young men who kept the hotel, with two violins added to their piano and 'cello, gave us quite a concert, including, to our surprise, "Ein feste Burg, &c.," and several of Schumann's fine chorales, winding up with the delightful "Traümerei." The charges here were 3s. 6d. a day; this included, besides a comfortable little bedroom each, coffee and rolls in the morning, a substantial meat lunch, a dinner of three or four courses, and a very excellent white wine from their own vineyard, with coffee after each meal if desired.

We asked if it was possible to make this pay, and they said, "No!" but there was such competition they could not help themselves, and one of them had taken up photography by way of redressing the balance. He was quite an artist, and we made a raid upon his stock which evidently pleased him. There was a very attractive looking defile not far away, which led to a famous old ruin called the "Castell del Rey," and up this, under a scorching sun, Nicholson and the estimable Treasurer of the Entomological Society of London made their way.

Feeling rather depressed with our want of success I sat down in the shade to make a sketch of an old Roman bridge, and was somewhat consoled to find that as far as butterflies were concerned, I had lost nothing by allowing my companions to go on alone, as they added nothing new to our list. Here—as indeed almost everywhere—the most conspicuous phanerogam was the gay, dégagée-looking *Galactites tomentosa*, and on the higher levels the stunted Palmetto (*Chamærops humilis*) disputed a foothold on the bare soil with the singular *Ephedra fragilis* and its dense tangle of thin, jointed, leafless twigs. Among the Gramineæ occurred those two lovely soft Channel Island plants, *Lagurus ovatus* and *Cynosurus echinatus*.

We had intended to visit the stalactite caves of Arta and Manakor, and also to hunt up some of the famous Talayots, or megalithic monuments of a long past age, but time failed us, and on the following day, June 10, we drove to La Puebla, whence we took train to Palma, through a richly cultivated country. The olives here—many of them of enormous size and grotesquely twisted by the winds—are the principal trees in cultivation: then come the almond and the Carouba, or "Johannisbrod," as it is called in German, from the belief that its large brown saccharine pods are no other than John the Baptist's "locusts" (*Ceratonia Siliqua*), here sold as food for cattle and pigs. On the arable land beneath are grown bearded wheat, rye and oats—the latter just being gathered in. Near the towns and

villages the vine monopolises the soil, and an excellent white wine is made, which suits an English palate perhaps better than the somewhat heavy ferruginous red wine mostly affected by the natives. Arrived at Palma, we picked up our luggage at the Grand Hôtel and crossed over by the night boat to Barcelona.

(*To be continued.*)

NATURAL HISTORY NOTES.

277. Tomtits.—A pair of Tomtits built their nest at the top of the lamp column at the corner of Market Hill and High Street, Maldon, Essex, and there they have reared four young ones, although the gas lamp has been lighted every night. The young tits are now fledged, and have made their *debût* into the world. Their efforts to leave home have proved a great attraction not only to school children, but to numbers of "grown-ups." The Mayor, a lover of birds, has taken great pains to see that they are not molested, and occasionally a gentleman in blue has dispersed young spectators. It was interesting to see a big lad tenderly pick up one of the tits which had fallen off the column, and climb up and restore it to the nest. The next moment the bird flew off into the churchyard. The birds now sit on the column quite unconcernedly, and the old ones fly to and call them from the trees in St. Peter's churchyard.

278. The Grand Duke and the Bird's Nest.—A pleasing incident is related in the *Standard* from the racecourse at Keele Park, Staffordshire, where there were steeplechases recently. After the first day's racing a lark's nest, with three eggs, was discovered on the course near the winning-post, the ground all round it being marked by the hoofs of horses, by carriage wheels, and by crowds of people, who had thronged the course. The side of the nest had been cut by a wheel, but otherwise it was uninjured.

Intelligence of this rather remarkable occurrence came to the ears of the Grand Duke Michael of Russia, who is residing at Keele Hall. The Duke thought it useless to remove the nest, and it remained throughout the second days' racing, and again survived the ordeal. The peculiarity of the incident was heightened by the fact that, when examined yesterday, the nest contained three young larks, to which the parent birds were bringing food. The Duke has given orders that the birds, preserved as by a special dispensation of Providence, should be carefully guarded.

279. Swallows' Nests on Window-panes.—Your correspondent of July states that he started the swallows building their mud-hut on the glass pane. A friend of mine owns a lovely specimen of a martin's nest built wholly on the glass of a window. The birds had no assistance whatever. So unique was the subject that my friend had the glass pane cut out and framed the whole, and it is now in his lobby, where any one interested may see it. Recently Mr. Harvie Brown visited the locality, and so pleased was he that he had the frame and its contents, along with the owner, put under the camera, and no doubt in some of that author's forthcoming volumes we shall see this unique specimen of bird architecture reproduced. The owner of the nest is Mr. John Milne, Auchinblae, Kincardineshire, a keen and observant naturalist.

A. Nicol Simpson, F.Z.S.

280. Lesser Redpole.—These birds breed here, and for weeks together may be seen eating the aphis on my plum-trees, which makes me think them useful little birds. They are so cheerful and lively as to be quite a feature in my garden during the spring and summer.

August, 1905. Edmund Thos. Daubeny.

281. Sparrows.—In their mischievous habit of picking flowers sparrows do not confine themselves to primroses and crocuses. Just now they amuse themselves by destroying the first flowers on a large bed of seedling begonias, and prefer dark red blooms to any other colour.

August, 1905. Edmund Thos. Daubeny.

282. Golden Oriole at Selborne.—It may interest the members of the Selborne Society to learn that recently the Golden Oriole has been seen on the lawn of "The Wakes," Selborne.

August 12, 1905. J. H. M.

283. Snake-hunting in Wales.—An account having appeared in the *Standard* of the slaughter of a number of snakes near Llangollen, the following sensible letter was sent to that paper by the Rev. H. S. Fullagar, Rector of Hunworth, Melton Constable:—

"Your issue of May 22 gives account of the brutal slaughter of snakes in Wales. These snakes, as they were nearly 3 feet long, must have been of the common or ringed kind, called also water snakes, because often found in streams and ditches. This kind is harmless, and are of use in thinning the toads, frogs, mice, &c., upon which it feeds. It presents a formidable appearance by erecting its head and hissing, but its only means of offence is a malodorous liquid which it exudes at the tail; this it ceases to do when tame, and may be freely handled without offence.

"And so may another pretty animal, often called a snake, and ignorantly slaughtered—the blind-worm or slow-worm. Its extreme length is 15 inches. It may be known by its almost cylindrical body covered with grey or light brown scales, its blunt tail and crescent end to its tongue. It feeds upon slugs, and is of great value in a garden, being perfectly harmless.

"The viper or adder, which alone of the three is poisonous, is of about the same length as the slowworm, but flatter in body, darker in colour, with a pointed tail and forked tongue."

284. Honey-dew.—The writer of No. 275 says he has noticed on hot days "the upper surface of the leaves of Japanese anemone to be glistening with honey-dew where no aphides were visible after minute search." Some weeks ago I examined this plant in which the "glistening" of some of the leaves, especially when young and in vigorous growth, was very noticeable, and drew my attention to it. The leaf had no deposit on it. It was not sticky, and the "glistening" was not caused by aphis, but seemed to be the natural polish of the leaf itself. In the lime, however, a tree much affected by aphis, the leaf, if covered with a glistening varnish is very sticky and sweet to the taste, and after a time dust and other matter often adhere to it.

If a copious discharge of honey-dew can be discovered on any of Mr. Hastie's paving-stones in the open, and away from the influence of trees, the origin of the discharge must be assigned to other reasons than the excreta of aphis stationed on trees, but that paving-stone has still to be found.

If honey-dew be merely an exudation from the leaves in "too rapid transpiration," it would assume different characters in different plants. But why is it the same in character and taste, whether it comes from a lime-tree, an oak, a fir-tree, a laurel, or a cabbage? The answer is, because it has passed through the digestive organs of the aphis in all these cases.

Aphis and honey-dew seem to me to be cause and effect.

EDMUND THOS. DAUBENY.

285. I observe in your issue for August a confirmation of my contention that honey-dew is not the product of aphides, in fact, that as a rule, no aphides are visible on the tree when the honey-dew appears on it.

It would be interesting to know why the honey-dew exudes through the upper surface of the leaves and never through the under surface. I cannot help thinking that the rays of the sun, which strike the upper surface of the leaves, must be the cause of this.

There has as yet been no copious discharge of honey-dew in this neighbourhood during this summer. Although the heat has been very oppressive, the rays of the sun have been more or less tempered by cloud and a dull atmosphere. Is the honey-dew drawn through the upper surface of the leaves of some trees and plants, when the sun strikes them through an abnormally clear atmosphere?

I think that the rays of the sun cause a fermentation among the saccharine matter in the plant. The roughness of the surface of the leaves and the change

that is evident in it, is an effect that could hardly have been produced by an extraneous substance that has dropped on the leaves, unless after some time.

The theory that aphides ever voluntarily part with the nutritious juices of their bodies is difficult to believe.

Hampstead, PETER HASTIE.
August 4, 1905.

NATURAL HISTORY QUERIES.

59. Rooks.—It is said about here that rooks roost on the ground in the open fields in the height of summer, and especially in July. Is this a general habit?

Southacre Rectory, EDMUND THOS. DAUBENY.
Swaffham, Norfolk,
July 19, 1905.

60. Shamrock.—I should be glad if some one could explain a phenomenon which takes place in a certain shamrock which I possess. I have had it for a few years in a pot in the house, but until this summer it has never flowered. It dies down two or three times a year, and at the same time produces a number of little green seed-vessels, each containing one seed, but there has been no apparent flower. Are these really seeds, or is it a vegetative form of reproduction? They eventually produce new plants which spring up fresh and green in the pot.

Now this year one of the seeds, if such they be, sowed itself in the garden, and the plant which it has produced has borne a white flower rather larger than wood-sorrel and very like it.

CONSTANCE M. LACY.

[The plant, which has but small claim to the name "Shamrock," is a Wood-sorrel, or species of *Oxalis*. In the absence of a flower it is difficult to say whether it is not the British species, *O. Acetosella*. In this genus cleistogene flowers, *i.e.*, bud-like flowers which never open and are self-pollinating, are constantly produced and set seed abundantly. We have a Wood Violet (*Viola silvestris*) which for two years has done the same. The conditions which determine the production of these or of the chasmogamous flowers are not known.—ED. *N. N.*]

SELBORNE SOCIETY NOTICES.

[NOTE.—ALL ANNOUNCEMENTS WITH REGARD TO FUTURE MEETINGS OF THE CENTRAL SOCIETY OR BRANCHES WILL BE FOUND TOGETHER AT THE END OF THESE NOTICES.]

Objects of the Society.—To promote the study of Natural History. To preserve from needless destruction such wild animals and plants as are harmless, beautiful, or rare. To discourage the wearing and use for ornament of: (1) The skins and furs of such animals as are in danger of being exterminated; (2) the skins and plumage of such birds as are not domesticated. To protect places and objects of natural beauty or antiquarian interest from ill-treatment or destruction. To afford facilities for combined effort in promoting any of the above or kindred objects.

New Members.—*Central Society.*—Miss G. M. Grint, Bowes Park; Mrs. McKay, Regent's Park; David Morphew, Esq., Streatham; J. C. Wright Esq., Eastbourne.

Subscriptions.—The Council has great pleasure in acknowledging subscriptions of greater value than 5s. from the following Members: E. S. Morphew, Esq., £2 2s.; Colonel Bevington, V.D., J.P., £1 1s.; Capt. James Cundy, £1 1s.; David Morphew, Esq., £1 1s.; Andrew Pears, Esq., J.P., £1 1s.;

George Wheeler, Esq., £1 1s.; Miss A. E. F. Barlow, £1; Dr. Dudley Buxton, 10s. 6d.; G. S. F. Manton, Esq., 10s. 6d.; Mrs. M. A. Marshall, 10s. 6d.; Miss A. W. Smith, 10s.; Miss E. Wright, 10s.; F. J. Brewer, Esq., F.R.I.B.A., 7s. 6d.; Mrs. Broughton, 7s. 6d.; Dr. A. E. Malaher, 7s. 6d.; James Hill, Esq., 6s.; George Andrews, Esq., 5s. 6d.; J. W. Sharpe, Esq., 5s. 6d.; Ernest Walham, Esq., 5s. 6d.

Prizes for Junior Members.—The Council has decided to offer a prize of half-a-guinea each month, for the time being, to be competed for by Members of Junior Branches (Associates of the Selborne Society) and young Members. Details of the second competition are given below.

Regulations for the Second Competition.—A prize of half-a-guinea, offered by the Chairman of Council, will be awarded for the best series of two or more photographs illustrating the life-history of some creature or one of its habits taken by an Associate (member of a Junior Branch), or by an ordinary Member of the Society, under twenty-one years of age. All photographs should be clearly labelled with the name, address, and *age* (which will be taken into consideration in making the award) of the competitor, and should be in the hands of the Honorary Secretary of the Selborne Society, at 20, Hanover Square, W., by October 20th, 1905. All parcels to be securely packed and endorsed on the outside "Second Competition."

For particulars regarding the formation of Junior Branches in Schools and elsewhere, as well as of ordinary membership, application should be made to Wilfred Mark Webb, Honorary Secretary, 20, Hanover Square, W.

Library.—The Honorary Librarian will attend at 20, Hanover Square, from 6 p.m. to 6.30 p.m. on the evenings when the Publications Committee meets (at present on the second Monday in the month), for the purpose of issuing books to Members.

The Honorary Librarian has much pleasure in announcing the following additions to the Library: "Gilbert White's Natural History of Selborne," 1836 edition, kindly presented by Miss Ellen Shadwell; "Charters of Selborne Priory," purchased by the Society; "Wasps, Social and Solitary," by G. W. and E. C. Peckham; "Animals I have Known," by A. H. Bevan; "Wayside and Woodland Blossoms," by Edward Step; "To Selborne for a Holiday," by E. B. N.; "Observations sur les Guêpes," "Observations sur les Fourmis," and "Description du Matériel d'une Petite Installation Scientifique," by Charles Janet; Homeland Handbooks: "The Great Ouse," "Horsham and St. Leonard's Forest," "Lynton and Lynmouth," "Reigate and Redhill," kindly presented by the Editor.

NEWS FROM THE BRANCHES.

North Middlesex (Junior).—On July 7, Mr. C. M. Hall, M.M.S., gave a short discourse on the "Comparative Anatomy of the Vertebrata." After briefly sketching the conformation of the five divisions, he gave numerous instances of popular fallacies, such as placing the newts amongst lizards, calling whales and porpoises fish, a blind-worm a snake, and so on.

On July 8, about two dozen members of the Children's Section visited the Flower Show of the Wood Green Horticultural Society, in charge of Miss Grint, Secretary of the Section.

On Saturday, July 15, a number of Associates and friends of the Branch had a pleasant ramble at St. Alban's, Mr. W. Percival Westell, F.R.H.S., M.B.O.U., acting as guide. The various places of interest in the city were visited, after which the party wended its way to the "Fighting Cocks," which claims to be the oldest inhabited house in England. Here a substantial tea was provided. On the proposition of Mr. Hall, a vote of thanks was accorded Mr. Westell for his kind invitation to St. Alban's and the pains he had taken to make the visit pleasant and instructive. After tea the party walked over the site of the old Roman City of Verulamium, and inspected the remains of the old walls. The party was much impressed with thoughts of the contrast betweeu nearly two thousand years ago and the present time—now, all the beauty of rural simplicity; then, the noisy hum and bustle of a large important Roman city.

FIELD CLUB RAMBLES.

July 15.—For several years past a ramble has been made every season to West Drayton and Iver during July. On this occasion much the same route as usual was taken to begin with, namely, by the side of the Great Western Railway and along the banks of the Colne by the kind permission of the Thorney Weir Fishery Club. A halt was made at Iver Water Splash, which is one of the prettiest spots near London.

In the village of Iver the church was visited and a number of the party climbed the tower, in which on the way down Mr. William Lawrence gave a demonstration on the ringing of bells, showing how the bell is swung into position with its mouth upwards, as is done in real ringing. In foreign countries the bell is chimed or struck while at rest, and bell-ringing, as we know it, is a peculiarly English art practised only in these islands and in the colonies. By the very kind invitation of the Rev. Walter Gilliat, tea, provided by the landlord of the "Swan," was taken in the charming garden of the Vicarage.

Here Mr. George Nicholson, many years Curator of the Royal Gardens, Kew, pointed out the finest specimen of the "Weeping white lime" (*Tilia petiolaris*) that he had ever seen. The plant was originally described from a garden at Odessa; but where it originally came from is unknown. The specimen at Iver Vicarage is quite seventy-five feet high.

The return journey was made through the fields and down the left bank of the Colne. A number of interesting plants were, as usual, found. The following birds' nests were discovered, containing eggs or young: hedge sparrow, wren, greenfinch, swallow, fly-catcher, thrush, and skylark, by Mr. R. H. Read, who accompanied the party.

Fresh-water sponges were seen in the same place as last year, but were very small. Shortly after the ramble last year Mr. Webb procured a piece measuring fourteen inches across, which is now in the Natural History Museum, South Kensington. The Honorary Secretary, Mr. Wilfred Mark Webb, acted as guide, and a special vote of thanks was accorded to the Rev. Walter Gilliat for the use of his garden.

July 22.—In glorious summer weather twenty-five Members and friends met at Weybridge. By kind permission of Mrs. Greet, the present owner, we were privileged to go over the interesting garden planted by Dr. Lionel Beale. Cut out of a wood and protected on all sides by tall pines, here grow exotic palms and bamboos and a great variety of ferns and other plants. After voting cordial thanks to our hostess, we went on to Oatlands Park, where is to be seen one of the earliest of the cedars brought from Lebanon to this country, and planted about 1640 by Prince Henry of Otlandes, youngest son of King Charles the Martyr. The park and house of Oatlands have an interesting history, which was recounted by our leader, Dr. Henry Willson. The original building was erected by King Henry VIII. for the reception of Anne of Cleves. This unfortunate lady never entered the palace, which, after being the abode of Tudor and Stuart sovereigns, was sold during the Commonwealth and razed to the ground, the contents having been sold by auction, and many of the trees used for the Navy. The sole remains of this palace are a subterranean passage and the old garden walls. Later on the present house was built, which some fifty years ago was turned into an hotel. Ferrying across the river to Shepperton Lock, tea was enjoyed in the open air. Then the party broke up, some going on the water, some strolling along the river-bank, gathering flowers, and others visiting Shepperton village and church.

July 29.—Favoured by cool breezes tempering the bright sunshine, over thirty Members assembled at Coulsdon and proceeded to Farthing Downs. There are few spots near London where such profusion of flowers is to be found as on the sheltered slopes of these chalky uplands. Leaving the Downs and passing along the ancient Stane Street, we soon reached the interesting church of Chaldon. This parish is almost unique in that it contains no shops and no public house, and until some fifty years ago there were no roads connecting it with the outside world, nothing but tracks across the surrounding downs and commons. The name of Chaldon occurs in Domesday Book with the spelling Chalvedune, and appears to signify Calf Down. The church dates from about the year 800

and is dedicated to St. Peter and St. Paul ; the nave and chancel are the oldest portions, the aisles having been added at the end of the twelfth century. Hanging in the porch is a sweet-toned bell of a date certainly antecedent to 1250, and hence one of the oldest in England. One must also notice an old stone monument dated 1562, a coffin-lid of the early thirteenth century, some remnants of old stained glass of the later fifteenth century, an unusual piscina and the pulpit, dated 1657. But the gem in point of antiquarian interest is undoubtedly the painting *in tempera* on the west wall. Red and yellow ochre, native cinnabar and white, were the colours used in executing this monkish pictorial sermon, which was probably painted about the year 1200, and which was discovered under a coat of whitewash during repairs a generation ago. For a full description of this quaint relic of mediævalism one must see the pamphlet, copies of which were placed at our disposal by the courtesy of the Rector, the Rev. G. E. Belcher. After leaving Chaldon we followed footpaths to Coulsdon Common for tea at the "Fox" Inn, and returned to the station by the bridle-way adjoining Toller's Farm. A little rain fell during the last half-hour, the sole blot on an otherwise perfect day. The ramble was ably planned and most energetically conducted by Mr. Hubert Poole, the Honorary Librarian.

August 19.—Owing to the holiday season a small party of twelve only assembled at Northwood Station, when, under the leadership of Mr. Ernest A. Nash, a walk to Eastcote was undertaken. The route lay across the golf links and Poor's Field, whence a fine view of Ruislip Reservoir is obtained. A pupa of the Goat Moth (*Cossus ligniperda*) was found in Park Wood, and placed in a botanical vasculum for safety. A good deal of interest was aroused, when, half an-hour later, on opening the vasculum, a newly emerged Goat Moth was discovered beside its empty case.

On Poor's Field, missel thrushes, song thrushes, skylarks and pied wagtails were observed, mostly in moulting plumage. On the reservoir a tern, apparently an immature black tern, was seen flying up and down. This is a rare find for such a locality. After tea in the pretty old garden of the "Black Horse" Inn, Eastcote, a return was made to Northwood by another route, across Haste Hill, from the summit of which a beautiful view of Harrow was enjoyed.

FORTHCOMING EVENTS.

Indoor Meetings.

Business Meetings.—The next meeting of the Council will be held on Tuesday, September 26, at 5.30 p.m., and the Publications Committee will meet on Monday, September 11, at 5.30 p.m.

Annual Dinner.—The arrangements for the annual dinner in November have not yet been completed, but Members desirous of being present and of introducing visitors should communicate at once with the Honorary Secretary.

Lecture by Mr. Ernest Thompson Seton.—It has been suggested that a lecture by Mr. Ernest Thompson Seton should be given under the auspices of the Society some time in January. If this be arranged a large hall in London will be engaged, and the Secretary would therefore be very glad if those Members who would take tickets or could dispose of them would kindly communicate with him. The co-operation of local societies is invited.

Field Club Rambles for September.

Saturday, *September* 2.—Ramble round Oxshott and to the Black Pond. Meet at Oxshott at 3 p.m. Take cheap return tickets to Oxshott, 1s. 7d. Trains: Waterloo, 2.15; Clapham Junction, 2.27; Surbiton, 2.47.

Guides, Mrs. Percy Myles and Mr. Hubert Poole.

Saturday, *September* 9.—Epping Forest. Meet at Chingford Station at 3 p.m. Trains from Liverpool Street 2.8 and 2.23. Fare, 1s. return. Walk to High Beach, *viâ* Fairmead, returning *viâ* Sewardstone Green and Bury Wood. Tea at "Duke of Wellington" at 5.30.

Guide, Mr. C. Nicholson.

Saturday, *September* 16.—Woldingham, Titsey Hill and Oxted. Meet at Woldingham Station (S.E.R.) on arrival of train leaving London Bridge (Low

Level, S.E.R.), 2.13; Charing Cross, 1.48; Cannon Street, 2.0. Passengers from Charing Cross and Cannon Street *change at London Bridge*. Cheap return tickets 1s. 6d. *The cheap tickets are only available by these trains*. Return rom Oxted, 6.30 or 9.40. There is a return train on L.B.S.C.R. at 8.19; Members desiring to return by this should take single tickets from London, 1s. 5d. Tea at Botley Cottage, Botley Hill.

Guide, Mr. C. M. Mühlberg.

Saturday, September 23.—Woldingham and Chelsham. The trains and instructions are *exactly the same* as for September 16, only the return will be from Woldingham, and the times, S.E.R., 6.37 and 9.46; and on the L.B.S.C.R., 8.28. Tea at the "Bull" Inn, Chelsham.

Guide, Mr. Matthew Hunt.

Saturday, September 30.—Richmond Park. Meet at the Star and Garter Gate at 3 p.m. Stroll through Park to Ham Gate, where tea will be taken. Home through the Park another way.

Guide, Professor G. S. Boulger, F.L.S., F.G.S.

With the exception of the Fungus Foray in October in conjunction with the Essex Field Club, which I hope to be able to arrange again this year, and particulars of which will then appear in the October Magazine, these rambles will be the last for the season of 1905. With the close of the season will also end my connection with the Field Club as Honorary Secretary, which I assumed in March, 1899; and also of the Selborne Saturday Afternoons, which I started in November of the same year. I am exceedingly sorry that I am physically unable any longer to continue the work. I must thank Mr. H. B. Wilkinson for so kindly acting as Assistant Secretary for 1900-1-2; and Mr. Hubert Poole for help freely given in 1904 and 1905.

ANNIE R. MYLES,
Vice-President, Selborne Society; Hon. Sec., Field Club and Selborne Saturday Afternoons, 1899-1905.

ANSWERS TO CORRESPONDENTS.

Mrs. Lacy.—The plant is *Scorpiurus sulcata L.*, a native of Spain and Portugal and, as you say, one of the *Leguminosæ*. Few genera in that Order have simple leaves and the characteristic pod in these plants is one of those supposed to be mistaken by birds for caterpillars or centipedes. It is certainly an unusual weed for a Surrey garden.

1. All communications for NATURE NOTES must be authenticated with name and address, not necessarily for publication.

2. The return of an unaccepted contribution can only be guaranteed when it is accompanied by a stamped and addressed envelope. We cannot undertake to name specimens privately, to return them, or to reply to questions by letter.

3. All communications for any number must be in the Editor's hands by the 10th of the preceding month.

4. Communications for NATURE NOTES, books for review, specimens for naming, &c., should be addressed to the Editor, PROFESSOR BOULGER, F.L.S., F.G.S., 11, Onslow Road, Richmond, Surrey.

5. For the supply of the Magazine to others than Members, or for back numbers (except in the case of new members), address the publishers, with stamps at the rate of 2½d. per number, Messrs. JOHN BALE, SONS AND DANIELSSON, Ltd., 83-91, Great Titchfield Street, London, W.

6. Letters connected with the business of the Society, subscriptions, and applications for membership, should be sent to the local Honorary Secretary, or to the Honorary General Secretary of the Society, WILFRED MARK WEBB, F.L.S., at 20, Hanover Square, London, W.

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Nature Notes:

The Selborne Society's Magazine.

No. 190. OCTOBER, 1905. Vol. XVI.

SELBORNIANA.

Leaflets.—The paper on "Fur-bearing Animals" by Mr. C. M. Mühlberg which appeared in our last issue has now been printed as a leaflet, and copies may be had on application to the Honorary Secretary. At the request of the Council, the Honorary Secretary is drawing up a full account of the Egrets which are so cruelly sacrificed for the sake of the plumes known as "ospreys." In order that this leaflet may be adequately illustrated and produced in an effective form, it has been decided to open a special Leaflet Fund, contributions towards which may be sent to the Honorary Secretary.

Warley Woods Secured.—We are pleased to hear that the Warley Woods Committee have now sufficient funds in hand to enable them definitely to purchase the Woods for the public. We congratulate Birmingham on having secured this valuable open space, and we may, perhaps, be permitted once more to point out that the successful carrying out of this enterprise is a proof of the utility of local branches of the Selborne Society as at least nuclei for concerted action.

Roman Remains near Selborne.—Traces of a Roman station have been discovered in a wood at West Meon, near Petersfield. Already several tesselated pavements, supposed to belong to the mansion of a Roman centurion, have been unearthed, together with the heating apparatus of the mansion and several other objects of great interest. One of the pavements has, unfortunately, been broken by the roots of a tree. In each case the find was made a foot beneath the surface.

The remains of several Roman villas have been found in the neighbourhood during the last few years, and White, in his "History of Selborne," it will be remembered, mentions some discoveries in the district in his time.

Yet another "Selborne."—Mr. Charles Mosley, editor of *Nature Study*, has arranged an edition of "White's Selborne" for students, in which the whole of the letters are classified under subjects giving the reader all that the naturalist wrote on one topic under one head. As the subjects will be arranged alphabetically, the work will be one of reference as well as for reading consecutively. Mr. Elliot Stock is to publish the book during the coming season.

The Zoological Society.—Messrs. Cassell have in preparation a limited edition of an illustrated history of the Zoological Society from the pen of Mr. Henry Scherren, F.Z.S. The work, which will be issued this autumn, embodies material collected by Dr. Sclater, and the proofs have been read by Dr. Chalmers Mitchell. It will contain reproductions of some of Joseph Wolf's unsurpassed drawings of animals.

The Birds and the Farmers.—We understand that the Central Chamber of Agriculture proposes to take up the question of bird destruction, which is referred to very fully in the recently published evidence given before the Departmental Committee on Fruit Growing. The matter will be discussed at the meeting of the Chamber this month, when an effort will be made to secure greater uniformity in practice among the County Councils with regard to the protection of rare birds and the extirpation of those which play havoc with the fruit crops and buds. There is considerable difference of opinion as to the amount of injury birds inflict upon crops, some arguing that the extirpation of certain birds, such as the bullfinch, would be a very serious thing for the fruit-grower and market gardener.

Plant Protection.—The Editor will introduce a discussion on the preservation of our native plants at the Conference of Delegates of Corresponding Societies of the British Association on October 30.

An Adjustable Camera-Stand.—So many naturalists are now working at the photography of living objects in their natural surroundings that a stand which enables the camera to be directed upward, downward, or in any other direction, without loss of rigidity, will undoubtedly be widely welcomed. Such is the claim put forward on behalf of the "Swingcam" Camera-stand, invented and sold by Mr. William Butler, of 20, Crosby Road, Birkdall, Southport, who, while an engineer by profession, is also an enthusiastic photographer of natural history objects. Mr. Kearton has tested the apparatus, and has expressed himself as fully satisfied with the result.

Old West Surrey.—Local customs, folk-lore, &c., have been as yet so imperfectly recorded that it is difficult for the student to discriminate between what is truly local and what is more general. Our county boundaries sometimes represent old

tribal divisions, but it is probably seldom that any old custom or tradition that has survived from more primitive times will now be restricted by such arbitrary limits. Accordingly we

RUSH-LIGHT HOLDERS.
(From "Old West Surrey." By kind permission of Messrs. Longmans.)

RUSH-LIGHT HOLDERS.
(From "Old West Surrey." By kind permission of Messrs. Longmans.)

were not surprised, on recently reading Miss Jekyll's pleasant volume, "Old West Surrey" (Longmans), to find that in many points it illustrates Gilbert White's history of a parish but a few miles from the boundary of the authoress's district. Those

who were at our last Conversazione will remember the interesting series of rush-light holders then exhibited, which are described in the twenty-sixth letter to the Hon. Daines Barrington in White's "Selborne." By the courtesy of Messrs. Longmans we are able to reproduce two of Miss Jekyll's illustrations of these objects. Students of Gilbert White will also be familiar with his description, in the fourth letter to Pennant, of the

Wall with Garneted Joints.
(From "Old West Surrey." By kind permission of Messrs. Longmans.)

embellishment of walls with chips of ironstone stuck into the mortar of their joints. White seems to have known neither name nor reason for this practice, which is general in Surrey and other Greensand districts, but Miss Jekyll says that it is known as "garoting" or "garneting" the joints, and it seems to be designed to check the action of frost on the mortar. This also we are similarly enabled to illustrate from her work, in which, no doubt, readers will find for themselves other material for the annotation of our classic.

AMONG THE BUTTERFLIES AND FLOWERS OF MAJORCA.

(*Concluded from p.* 174.)

THUS ended an expedition which, although full of interest from the entire novelty of our surroundings and the unaffected courtesy of the inhabitants, can hardly be said to have answered our expectations as regards that branch of entomology with which we were mainly concerned. It is difficult to realise that in ten days' fairly hard work we only saw thirteen species of butterflies. There would have been a few more, doubtless, in the early spring, and again in the late summer, but the sum total would probably be well under thirty. In Corsica, during the month of June, we found forty-six species, and from other records the total for the year should approach seventy. In Majorca, the scarcity of water and the xerophytic character of the vegetation would certainly affect the conditions of life to an extent which might alone account for the discrepancy in numbers, since Corsica is intersected by rivers and streams in every direction. Geologists tell us also that the Balearic Isles were separated from the mainland at a very early period, before the first premonitions of the great ice age made themselves felt, unless we are to accept the most recent pronouncements of Sir Henry Howorth and Sir Archibald Geikie, the latter of whom condemns the glacial theory as "a vague speculation having no foundation in physical fact." In any case, glacial action could not have affected the flora and fauna of these Islands; but denudation was probably very considerable, sinking the level of the mountains and restricting the faunistic area. The increasing dryness of the climate must likewise have acted prejudicially on the increase or preservation of existing species.

It was nevertheless very disappointing not to come across a single endemic species of butterfly, nor even any marked forms of existing ones: indeed, I could take ten out of thirteen most summers in my own garden. And this is the more remarkable in that the flora is comparatively abundant and varied, numbering about 1,300 species: it is, however, mostly of a character that looks hardly conducive to the healthy nourishment of larvæ. And in this connection it just occurs to me to wonder, in view of the exceptionally large proportion (as observed by us) of males to females, whether there may not, after all, be something in Mrs. Hutchinson's contention that you can determine the sex of lepidoptera in the larval stage—high feeding for females, starvation for males; and whether here it may not be in operation on a large scale under natural conditions. Carry this idea a step farther, and with the elimination of the female the race drops out of existence! But it is quite time I came ashore. It is so easy to get out of one's depth!

I append a list of Rhopalocera taken or observed:—

Pieris rapæ L.—Fairly abundant everywhere, normal in character.

Colias edusa F.—Not common anywhere, normal.

Gonepteryx rhamni L., and *Cleopatra L.*—One or two of each only, on cultivated land near Pollensa.

Pyrameis cardui L.—One only, at Soller, just emerged, but very small.

Pararge Ægeria L.—Generally distributed, but more common at Soller and Pollensa than elsewhere. Ground colour deep orange; specimens undersized.

Pararge Megæra L.—Generally distributed and typical.

Epiniphele jurtina L., var. *hispulla Hb.*—Not common: the type does not appear.

Epiniphele Ida Esp.—Common on waste ground outside Pollensa, and one small male at Soller.

Chrysophanus phlæas L.—Not common, typical.

Lycæna astrarche Berg.—At Miramar only, not common, typical.

Lycæna iacrus Rott.—Abundant everywhere; typical but dwarfed, and the females of the Continental form, not the entirely brown form of Corsica and the Mediterranean littoral generally.

Cyaniris argiolus L.—At Soller one or two; fairly common at Pollensa.

We saw scarcely any Heterocera at all, and at the end of a long day in the hot sun one has not much energy left for "mothing" or sugaring posts, and the electric lamps appeared to have no attraction at all. A dead *Deiliphila livornica* was brought to us at Soller.

Lindfield, Sussex,
July 25, 1905.

R. S. Standen, F.L.S., F.E.S.

BIRDS IN THE FIELD AND GARDEN.

IT would be idle to deny that there are certain species amongst the birds that inhabit these islands which do an appreciable amount of harm to the farmer and the horticulturist. At the same time, if we would consider the matter from a common-sense point of view, and would wish to judge fairly upon a subject which is, it may be fairly said, of great importance, we must not allow ourselves to be carried away by the arguments of prejudiced persons on the one hand, and those of sentimentalists, pure and simple, on the other.

It is by no means necessary, and indeed it would be wholly unjust, to assume that, because some particular ornithological variety commits evident havoc among the crops that are the result of man's labour, such a bird may at once be classed as a pest and worthy of no merciful consideration. Experience

has indeed proved that it is those very varieties whose mischief is most apparent that do a considerable amount of good as a set-off to their depredations. Whether in every case the good work accomplished by them is in excess of the harm they do, or the reverse, cannot be determined, except by the most careful consideration, which must extend over a lengthy period, and not be hastily determined upon data furnished at any one particular season. And we must further bear in mind the fact that the evil that birds do is always the more readily apparent to the eye than the good. The farmer, for instance, who notices the rooks at work upon his stack, tearing off the thatch to get at the corn beneath, has at once *primâ facie* evidence of the ill-doing of the rook. But with what amount of certainty can he gauge the number of harmful slugs and grubs, or the myriads of wireworms, which those selfsame rooks, who are to-day devouring his corn, have accounted for during the past twelve months? How, again, can the ordinary gardener, even if he were willing to consider the matter, which is indeed seldom, calculate the number of snails and other noxious insects destroyed by blackbird or thrush during the year, in exchange for the strawberries and currants of which these birds take toll in the summer?

And we have yet another point to consider before we write down as useless and inimical to man's interests those birds which admittedly do a certain amount of harm. Any observant person, whose studies have been carried out in a careful manner, and not only in a superficial way, will be able to testify to the fact that in many cases it is the individual of a particular species, and not the whole tribe, that is the aggressor. One could cite numerous instances, but on the present occasion it will suffice to mention one only to illustrate the truth of this statement. It is a well-known fact that rooks (to take again for our purpose that familiar and much-abused bird) will on occasion develop a remarkable liking for the eggs of game and poultry, and even the newly hatched young of both. Yet it is an absolute fact that in such cases, although the rookery may be at no great distance, the havoc is all wrought by a few individuals, who have acquired a vicious taste quite apart from that of their tribe. And it has been proved that once these individuals have been captured or destroyed the mischief ceases as suddenly as it began. Cases of this kind frequently come under the observation of poultry-keepers and game-preservers, yet it would be unfair in the face of such evidence to condemn the whole tribe of rooks as being generally harmful to their interests. As well might one condemn the whole human race as murderers and cannibals, because a remote African tribe with a propensity for a diet of human flesh has captured a missionary and dined off his unfortunate body.

For the purposes of the matter under discussion birds may

be divided into three classes—firstly, those that are granivorous ; secondly, those that chiefly subsist on a diet of flesh or insects ; and thirdly, those that are both granivorous and insectivorous or carnivorous. Although, strictly speaking, we cannot describe birds whose diet, in addition to grain and seeds, consists of vegetable substances as being granivorous, we can, for the sake of simplicity, class them under one head for the time being. With each of the classes the gardener and the agriculturist have in some measure to reckon, and it will be unnecessary to notice any but those species which are the most common and abundant, since varieties of rare or occasional occurrence only affect the horticulturist to an infinitesimal degree as concerns his welfare or his detriment.

The most prominent members of the first class are the finches —the bullfinch, the goldfinch, the chaffinch, greenfinch and linnet being the best known of all. Few gardeners can be found to say a good word for any of them, and one feels bound to admit that it is chiefly for the reason mentioned above, namely, that while the harm is often apparent, the good they do it is impossible to estimate. We cannot deny that certain of the birds have a partiality for the buds of gooseberries and currants and the seeds of certain choice garden plants, and one can well sympathise with the aggrieved gardener when he sustains loss by reason of a visit of the finch tribe to his beloved sanctuary. Yet a hasty condemnation of the finches would be as ridiculous as it is unjust. The season when buds are attacked by the birds is only a limited one, and the same may be said of the period during which choice seeds are procurable. Upon what, then, do the birds subsist when these two articles of diet are not to be had ? Obviously, they must be living on the seeds of weeds, thus directly employing their time to the benefit of the gardener or the farmer. In some seasons, indeed, they pay no visits to the fruit-bushes at all, occupying their whole time in devouring the seeds of thistle, plantain, dandelion, groundsel, and many other weeds, all of which are a source of vexation and trouble to mankind. But no gardener or farmer is able to estimate the number of seeds of undesirable plants that are thus destroyed, and he probably gives no thought at all to the matter. Nor does he often seek to enquire as to other causes for the shortness of his currant or gooseberry crop. The birds are the scapegoats, and should he see but one pair of finches during the whole season in his currant bed, he will often only too readily lay the charge of an unsuccessful crop at their door, forgetting the late spring frosts, the blight, the caterpillars and the injurious insects that may, for all he knows, be really responsible for the failure of his crops.

The common sparrow, though coming in the Passerine group, together with the finches, so adapts himself to existing

circumstances wherever he may happen to be, that it is difficult to classify him under any particular head as regards his diet. Much has been written for him and against him, and he is, outside our towns and cities, generally regarded as the enemy of mankind. That he, in common with the finches, and the mainly insectivorous tit, develops a liking for fruit-buds, we will not dispute, and his appetite for corn is well known to the agriculturist; but for him also we could urge a point in his favour, taking into consideration that as a set-off against his evil deeds he destroys many grubs and noxious insects in addition to the seeds of hurtful plants.

The tit family, which belongs to the insectivorous group, is one which vexes the gardener considerably so far as three of its members—the great tit, the coal-tit and the blue or "tom-" tit—are concerned. The crime urged against them is also chiefly in connection with the buds, although it has been contended that the tit only visits or tampers with those buds that contain an injurious insect, and which therefore would in any case prove unproductive. The contention is somewhat difficult to uphold, seeing that the bud is destroyed in the operation and all trace of the insect's presence is removed; and whether the tit's instinct enables him to know which bud contains an insect and which does not, so that he is never liable to destroy one of the latter, is a point upon which one is a little afraid of offering opinion. But even if we grant that the tit, like the finches, takes toll of the fruit-buds, we have much to urge in the way of compensation for this misdemeanour. The tits are quite the busiest and most industrious of all birds. One has only to watch them at their work to be convinced of the wonderful amount that they must get through in the course of their busy lives. They are apparently never idle, and never pause in their endless hunt for insects except to fly from one tree to the other. Their sharp little eyes search out every nook and cranny, and woe betide the insect that comes within their keen vision and in reach of the small but merciless beak.

The thrush tribe, of which the two most familiar members are the blackbird and the common song-thrush, are two of the gardener's greatest friends during the major portion of the year. For a brief period only do they trespass amongst the fruit, and no gardener should grudge the trouble entailed in netting strawberries, raspberries, and currants as a protection against these lovers of fruit. During the rest of the year the gardener derives incalculable benefit from their handiwork amongst the slugs, snails, and grubs that would otherwise be impossible to deal with; and were he able to draw up an imaginary balance sheet he would doubtless find that the cost of netting his fruit for a few weeks in the summer is as nothing compared to the saving effected through the agency of the birds.

Perhaps the cuckoo is entitled to first place amongst the insectivorous birds that are of benefit to the horticulturist. Unfortunately his stay in this country is of but brief duration, but he comes at the time when he is most needed. In the spring—at which period insect life begins to wake up and commence its work of destruction amongst the trees and bushes of garden and orchard—the cuckoo makes his appearance in our midst, and he and his companions, sometimes half a dozen together, are to be seen from morning till night amongst the apple and pear trees and the fruit-bushes, on the hunt for caterpillars and the larvæ of the many noxious insects that lay their eggs on the branches and within the bark of orchard trees. The cuckoo is a large and hungry bird, and the number of noxious creatures he destroys in a single day can only be well appreciated by those who watch him at his work. Any one who has had an opportunity of judging the capacious appetite of a young cuckoo, fed by his hard-working and deluded foster-parents, can well understand the number of grubs and caterpillars necessary to appease his voracious appetite.

It is always a difficult matter to convince the British farmer that any bird that flies is of use to him, or can do anything but harm to his crops. He will tell you that what he sees he believes, and one has again to contend with the fact that harm done is always more apparent than the good. One must admit that the rook will at times display a liking for potatoes, and he is not averse to a diet of newly sown wheat. Nor does he hesitate to strip the thatch from the ricks in the stackyard when the ground is frozen hard and he cannot eke out his living in the fields. But in a matter of this kind, where evidence on both sides is to be had, we must judge by comparison between the facts for and against the object of our discussion. We must give each bird that is accused of theft or mischievous behaviour an impartial trial, and weigh the facts in his favour against those sins of which he is accused, and if the former outweigh the latter he deserves an acquittal.

Perhaps the farmer's greatest scourge, at any rate so far as most agricultural districts are concerned, is the wireworm, for the destruction of which deadly pest no efficient and practicable remedy has yet been devised by man. Gas-lime is useful, but its use necessitates a cessation of crops on the land treated with it for a lengthy period, and this involves pecuniary loss to the farmer. Its action also rather tends to drive the pest down out of its reach for a time only, after which it returns as lively as ever; although the value of lime as a temporary remedy and as a manure is undoubted. But there is no wireworm trap that can equal the gizzard of the rook. He never tires of the pursuit and may be seen day after day upon the same fallow, hunting for his legitimate prey. The number of

wireworms that a flock of rooks will devour in a season is prodigious, and we have it on the authority of Miss Ormerod, than whom no one has given greater study to the subject, that the wireworm will live for seven years, and that the "click" beetle into which the chrysalis of the wireworm eventually develops, is capable of laying no less than a million eggs. And nothing comes amiss with the wireworm. This worst of insect pests will destroy with equal effect the roots of corn, grass, or potato tubers, and the progeny of one single beetle is capable of spoiling a far greater proportion of the farmer's crops than a whole flock of rooks, against whom he is for ever anxious to wage war. The cost of rook-scaring during the few weeks after the corn is sown and of rethatching ricks that have been pulled about in winter time must be but a small matter in comparison with the untold good wrought by the rook in his usual and everyday occupation.

Of other birds that are of inestimable benefit to the agriculturist the peewit and the lark are two of the most prominent. There is absolutely nothing that can be said against the former bird, and as a friend of the farmer it would be hard to find his equal. He has no taste for corn or any other of the farmer's crops, spending his time in the search for grubs and insects upon the fallows, and when the frost drives him from his usual haunts he betakes himself to the water meadows and ekes out a bare existence searching for food amongst the mud alongside of running streams.

He is a wary bird and well able to protect himself from the gunner, and from this cause his numbers suffer but little diminution. The farmer's hand is not against him, for he is generally regarded as a friend, as indeed he most truly is. But it is a thousand pities that the craze for plovers' eggs is still as prevalent as ever, and it is to be regretted that the taking of them is not severely prohibited. Many observers have given it as their opinion that peewits are less common in many parts than formerly, and it cannot be doubted that the annual collection of their eggs for eating purposes has brought about this state of things. It would be a bad day for the farmer if the peewit were to become extinct.

There is but one grievance which the farmer cherishes against that generally universal favourite, the lark. In very hard weather he commits some havoc amongst the young clover, it being urged against him that he nips out the centre shoot of the plant. Opinions differ as to whether the actual harm done to the clover plant in this way is really serious, but, even if it is, it only happens in exceptional seasons when the land is frost-bound for weeks at a time and the birds are hard put to it for sustenance. At other times the farmer has no case against the lark, whom he should regard rather as a friend than an enemy.

There can be but little doubt but that the plagues of rats and mice with which we are periodically visited are directly traceable to the short-sighted policy of those who have done all in their power to exterminate the owls and kestrels which were formerly so common everywhere. It is not contended that the farmer himself is responsible for this wanton destruction, although he has done but little to befriend two birds which may be numbered amongst his greatest friends. The keepers of game-preservers, with mistaken zeal, have systematically destroyed both these good friends of the farmer and of the game-preserver, until the owl is now quite a rarity in many parts and the kestrel practically extinct in several counties. The barn owl subsists largely on rats, mice, beetles, and cockchafers, and is the most beneficial of the whole tribe to the farmer. He may occasionally pounce down upon a young rabbit in the moonlight, but of what value to any one is an occasional rabbit sacrificed as a tit-bit to one whose life is so well employed in destroying the enemies of mankind? The other owls are vermin destroyers also, but not to quite the same extent as the barn owl, whose presence in the district ensures the farmer against the depredations of vermin and so saves him not only his corn and stores, but also the expense which is incidental to trapping and the destruction of vermin in other ways.

The kestrel is also a devourer of mice, beetles, and other insects, and as such deserves the strictest preservation. His presence amongst the hen-coops is not necessarily indicative of a desire to annex one of the chickens from the brood. Rather is it evidence, as in the case of an owl seen under similar conditions, that there are rats and mice in the neighbourhood, attracted thither, no doubt, by the presence of the food thrown down for the chickens. Numerous instances could be brought forward in support of the argument that owls and kestrels are the farmers' friends. Some two years ago a pair of the former took up their abode in an old barn on a farm which was then under the care of the writer, and upon which some ten or twelve hundred small chickens were being reared in the open fields. Night after night they would hover round close over one's head, knowing that they were safe from harm, and to see them hawking in the air for beetles and cockchafers was an exceedingly picturesque sight. They were frequently to be seen in the neighbourhood of the coops, before the chickens had gone to roost, yet never did they attempt to seize one of them, and the hens themselves grew quite used to the large unwieldy birds. Usually on this farm there was a large number of rats, attracted by the quantity of food that was always on the premises, but soon after the appearance of the owls on the scene their numbers grew perceptibly smaller, and their bones, which were cast up by the owls in pellets together with the scales

of smaller fry, bore eloquent testimony to the cause of their disappearance.

Like the gardener, the agriculturist has no good word for the sparrow, and perhaps, seeing that his numbers are so great and that he appears to be able to hold his own in spite of his enemies, it is unnecessary to urge much in his favour. That he has some virtues to set off against his crimes is beyond doubt, for he is a devourer of grubs and other harmful insects, but in his case there is perhaps the least possible to say in his favour. He is not now what Nature intended him to be. He has become demoralised as a result of his civilisation, and we greatly fear that he prefers to take the food which is the most easy for him to obtain; but his race is so abundant and he is so well able to take care of himself that it would be superfluous to say anything further on his behalf.

The question of bird preservation is one that deserves far closer attention upon the part of gardeners and agriculturists than it generally receives. It is a matter which should be of the greatest interest to each one of us, whether it be that we take a keen pleasure in the mere existence of bird-life or look upon birds as creatures that are intended to fulfil some mission in life. Happily the efforts of societies and individuals have been productive of much good in our own country, and it is to be hoped that we are for ever to be saved from the fate that has overtaken other lands where the destruction of useful birds has been allowed to go on till it was too late. It is so easy to destroy, but so difficult to replace, as many have found to their cost. Enough wanton slaughter by the thoughtless and enough destruction by the ignorant has already taken place in our own land and let us strive to prevent it from going further. There are two sides to the question, and it is fair that both should be heard, but with better education as to the habits and uses of our British birds, it will follow that the question that affects their preservation or destruction will be discussed more upon the principles of common-sense than from the point of view of the sentimental and the prejudiced.

"EAST SUSSEX."

REVIEWS AND EXCHANGES.

The Fungus Flora of Yorkshire. A Complete Account of the Known Fungi of the County. By G. Massee and C. Crossland. Botanical Transactions of the Yorkshire Naturalists' Union, Vol. 4. A. Brown and Sons. Price 10s. 6d. net.

We congratulate the Yorkshire Naturalists' Union in being the first county society to complete a fungus flora. The work has been going on for seventeen years, and though the goodly volume that chronicles in systematic order the results of more than fourteen fungus forays bears only the names of the Chairman and Secretary of the Mycological Committee, more than a dozen others have assisted by investigating special districts. The Myxomycetes are included, but

not the Schizomycetes; as, however, there are, as it is, over 2,600 species enumerated in a volume of less than 400 pages, the amount of work involved has not been trifling, whilst the authors' names are a sufficient guarantee of its accuracy. Valuable notes on habitats are added and the distribution of the species is traced through the five vice-counties; whilst appendices of additions occupying some twenty pages are an unfortunate but inevitable result of the fact that publication of the material in the *Transactions of the Union* has been spread over nearly three years.

Hertford and its Surroundings. By William Graveson. Homeland Handbooks. Homeland Association. Price 1s. net.

Though a county town, Hertford is neither very large nor very busy. It is, in fact, almost as rural as its surroundings, although it celebrates this year the tercentenary of its existence as a municipality; and a district the main literary associations of which are with Izaak Walton and Charles Lamb, has more affinity to the golden age when men did "fleet the time carelessly" than with the present period of bustle. Angling, therefore, finds suitable prominence in this excellent example of an excellent series, though golfing strikes a more modern note, and reference to the possibilities of cycling appropriately introduce a chapter on the neighbouring Haileybury. The volume is, as usual in the series, well illustrated and provided with an ordnance map.

Field Path Rambles: "West Herts" Series, Second Part. By Noah Weston. R. E. Taylor and Son. Price 1s. net.

The Londoner who knows not the valleys of the Chess, the Gade and the Ver, and has the use of his legs, had better take the earliest opportunities of making their acquaintance with this little guide in his pocket. As we hope the book will be largely so used, we regret that a sketch map showing the means of access by rail has not been added. Twenty-five illustrations suggest the rural charm of village, common and mill-stream, in such neighbourhoods as Chenies, Langley, and Radlett, neighbourhoods dear to the Selborne Society Field Club, and the detailed description of field-path rambles characteristic of this series makes this, like its predecessors, an invaluable guide to the stranger and pilgrim.

Tramway Trips and Rambles. By A. E. Davies and E. E. Gower. R. E. Taylor and Son. Four Sections. Price 3d. each.

As "the great wen" grows, the rambler has to go further afield for rustic peace; but, *per contra*, modern "civilisation," as represented by suburban trains and electric trams, enables him readily to reach new centres for his divagations far from the City's heart. Messrs. Taylor and Son, to whom ramblers have long been so deeply indebted for guidance, have found in this development of to-day a new and happy inspiration, and here, with the help of Messrs. Davies and Gower, they describe for the benefit of Londoners twenty-three tram rides and forty walks approached by the same means, the whole grouped in four sections, north, south, east and west. Here one learns how much of beauty and interest is within our reach for a fare seldom exceeding a shilling, with a walk of a couple of hours. These little guide-books, which are in octavo, instead of the familiar duodecimo of "Field Path Rambles," contain some excellent illustrations of the churches and other places to be visited.

The Horniman Museum: Handbook to the Case arranged as an Introduction to the Study of Birds' Eggs. London County Council. Price 1d.

The opening sentence of this admirably conceived and no less admirably executed little handbook runs as follows: "The arrangement of the specimens in this case is designed to encourage the observing rather than the mere collecting of birds' eggs, by illustrating some of the many interesting facts that may be learnt by the intelligent study of their characteristics." This is as it should be. The whole subject is discussed scientifically with the help of a good bibliography and six excellent plates. We have only one fault to find with these handbooks to this invaluable Museum, issued by the London County Council. They represent arduous work of a high order on the part of some one who should have the credit of it; but the only name they bear is that of Mr. G. L. Gomme, Clerk to the Council, who, we believe we may confidently state, is not their author.

School Gardening. By W. E. Watkins and A. Sowman. George Philip and Son. Price 2s. 6d.

This eminently practical little book, which, by the bye, is somewhat highly priced, since, though illustrated, it contains but little more than a hundred pages, is the outcome of the educational work of the East Suffolk County Council. It is arranged by months from October to September, and concerns itself mainly with vegetables and fruit-trees. The preparation of the soil, sowing, pruning, layering and grafting, are well and simply described, and, though the text contains little reference to the "botanical plot" shown on the plan, there is some mention of flowers. The work is disfigured by too many mistakes in the spelling of names, which a few minutes' revision by any botanist would have obviated. We hardly recognised Mr. Bunyard as "Bunjard."

The South-Eastern Naturalist for 1905. Elliot Stock. Price 2s. 6d.

Issued with commendable promptitude, this Report of the Tenth Congress of the South-Eastern Union of Scientific Societies, held at Reigate in June, reflects credit alike upon the editor, Mr. J. W. Tutt, and upon all those responsible for the organisation of the meeting. Mr. Swanton's notes on the temporary museum he arranged are fuller than in previous issues; Professor Petrie's presidential address raises the widest issues; and the papers are as diverse and as thorough as usual. The extinct Post-Pliocene Mollusca of the South of England, Treasure-trove, Mendel's theory of heredity, Lepidopterous ova and the Reigate flora are assuredly an attractively varied series. A new and sad feature in this year's volume is the fitting inclusion of an obituary of Professor Howes, the only one of the eight past presidents of the Union who has passed away.

The Essex Field Club Yearbook and Calendar for 1905-6. Edited by William Cole. Simpkin, Marshall and Co. Price 1s. net.

This new publication of one of our most successful field clubs is to be issued in future in April. It includes a calendar of fixtures, annual report and accounts, rules and list of members, but no scientific matter, and is illustrated with excellent views of Queen Elizabeth's Lodge, Chingford, and the Club's museums and a speaking likeness of Mr. William Cole, the founder and for twenty-five years Honorary Secretary of the Club.

The Essex Naturalist for April, 1905, contains Mr. Rudler's presidential address on Natural History Museums, and the first instalment of an important monograph of the British Woodlice by our Honorary Secretary, Mr. Webb, and Mr. Charles Sillem, illustrated with nine beautiful plates drawn from Nature by the latter gentleman, and engraved by Mr. F. W. Reader.

Report of the Committee on Ancient Earthworks, presented to the Congress of Archæological Societies, July 5, 1905.

This 6-page leaflet records what has been done throughout the country—and not by the Committee only—during the year with reference to earthworks. The co-operation of the editors of the Victoria County Histories has been secured. The Honorary Secretary, Mr. I. Chalkley Gould, whose address, Trapps Hill House, Loughton, Essex, ought to, but does not, occur on the Report, begs that he may be informed of the destruction or mutilation of earthworks, their purchase or acquisition by public bodies, or the publication of matter relating to them.

The University of Colorado Studies, vol. ii., No. 4, contains, with other papers not bearing upon Natural History, "A Study of Certain Foliaceous Cotyledons," by Dr. F. Ramaley, dealing with eight tropical species, and illustrated with three histological plates.

Received: *Commercial Economy in Steam and other Thermal Power-plants*, by R. H. Smith (Archibald Constable and Co.); *The Nature-Study Review* for May; *The Plant World* for June and July; *The Victorian Naturalist* for July; *Bird-Lore* and *The American Botanist* for July and August; *Our Animal Friends* for July, August and September; and *The Naturalist*, *The Irish Naturalist*, *Nature-Study*, *The Animal World*, *The Animals' Friend*, *The Humanitarian*, *The Agricultural Economist* and *The Estate Magazine* for August and September.

NATURAL HISTORY NOTES.

286. Mongoose and Cobra Fights.—In Indian bazaars the natives often give an exhibition of fights between a mongoose and a cobra; in which the mongoose comes off victorious, in spite of being bitten by a snake in full possession of its poison fangs. Hence the belief that the mongoose is proof against snake poison. This is not the case. Experiments have proved that it only requires a little more of the poison to be injected into its system, than into a rabbit's, to cause death. The mongoose is such a skilful fighter, and so very quick, while its hair is almost as good a protection as a coat of mail, that it is almost impossible for the cobra to strike it fatally. It watches its antagonist, and jumps aside when the snake strikes, and if it does receive a bite no fatal effect follows. The poison fangs being back in the jaw, the cobra's mouth must be opened wide to bring them into play; and to be effective the blow in striking must be driven right home. When the cobra bites its adversary its front teeth rarely, if ever, reach the skin of the mongoose; and the poison fangs do not penetrate at all. Thus the mongoose may apparently be bitten over and over again without receiving a single scratch.

Southacre Rectory, EDMUND THOS. DAUBENY.
Swaffham, Norfolk,
September, 1905.

287. Swallows' Nest in a Closed Porch.—Our front door opens into a porch which is closed from 10 p.m. till 7 or 7.30 a.m., and lighted only by a small window which does not open. Early in their nesting season a pair of swallows began to build on the top of the arch over the door into the house. The housemaid destroyed the nest, but the birds began building again, and then she tried keeping the outer doors shut all day. But if any one left them open for five minutes the birds returned, and when the weather became hot they took advantage of the doors being again open all day, and quickly finished the nest. We forbade its being disturbed, and soon found that the hen was sitting. The cock roosted close to her on the dripstone of the arch every night, with his head turned towards hers, and was very attentive in feeding his mate all day, except twice when he got into the house by mistake and was very stupid about finding his way out again. They brought off four young ones, who used to sit in a row on the edge of the nest. They never can have had food before 7 a.m., usually later, but they throve well. For some days after they first flew, they came back to the nest during heavy rain, and the young ones came to bed at 6, the parents going on feeding them till 7.30 p.m., but a fortnight later they all stayed out till dusk. The hen flew off her nest every time any one passed through the door, till we thought the eggs would be chilled, but no harm came of it.

Cumberland, September, 1905. E. H.

288. Successive Occupancy of Nest.—I have known pied wagtails use a blackbird's nest after the young had flown, and last year I saw a wren rearing a late brood in a swallow's nest over an archway in my parish.

W. A. SHAW.

289. A Lucky Escape.—There is a very tame willow wren here which seems to delight in feeding in the middle of the road, and I have had to avoid running over it with my cycle on several occasions. The other day I slowed down as usual, but the bird got up as I was alongside and flew through my front wheel, luckily without injury. W. A. SHAW.

290. Scarcity of Nightingales.—In Northants we have not noticed any scarcity of nightingales this year, but garden warblers have been quite rare, though usually abundant. W. A. SHAW.

291. Birds of West Sussex.—Whilst away for my holiday in Sussex I heard that an osprey had been picked up in an emaciated condition with a trap on one of its legs. Its companion, however, was still in Chichester Harbour, and I know that the redshank and at least two pairs of stone curlews nested safely in the neighbourhood.

Haselbeech Rectory, Northampton. W. A. SHAW.

292. Kestrel.—Captain Norman, of Cheviot House, Berwick, writes: "I have a 'cage' or wire-enclosed space for certain small berry bushes. The doors have lately been left open, and one afternoon lately, I captured a fine kestrel which had flown in after the sparrows and could not see its way out again."

293. Plover.—As alarmist fears sometimes reach us with reference to the threatened extermination of the plover, owing to the large demand for its eggs, it may be of interest to record that, while travelling in the neighbourhood of Ludlow, Shrewsbury and Stafford, during the last month, I have seen several very large flights of this species.

September 10. G. S. Boulger.

294. Butterflies and Birds.—Butterflies are rarely attacked by birds in Britain, an immunity from persecution not always enjoyed in other parts of the world. One never reads or hears it suggested that British butterflies are nauseous to the taste, and we must look to other reasons for their freedom from attack. In dry seasons the Spotted Flycatcher sometimes tries to catch White butterflies, and, being much more swift of wing than they, has no difficulty in overtaking them. But it does not often make a capture owing to the butterfly's erratic flight. When seized the insect not infrequently escapes owing to the wings flapping in the bird's face, or to being held by a part of the wing that breaks away. Swallows occasionally make a dash at a White butterfly, only in play it would seem, for they rarely succeed in catching it. Many kinds, however, such as the *Vanessidæ*, are so sprightly and quick of wing as to defy pursuit, and are rarely objects of attack. A Small-Tortoiseshell butterfly, which had been weakened by fluttering in a window, on being liberated was at once pounced upon and eaten by a Flycatcher. In the experiments in rearing *Vanessidæ* in Battersea Park a few summers ago, towards which I contributed a number of larvæ, the Sparrows at once found out the difference between those reared under glass and the wild ones, and soon exterminated them.

Some of our butterflies are protected from birds by their colouring, their habits, and the places they frequent. In the Tropics some large, conspicuous butterflies of feeble flight are protected by their nauseous taste; and other kinds, not nauseous to the taste, so closely imitate them as to deceive the birds, and thus escape persecution. Edmund Thos. Daubeny.

295. Honey Dew.—In No. 285 Mr. Hastie thinks "it would be interesting to know why the honey dew exudes through the upper surface of the leaves, and never through the under surface." The answer to his conundrum is simplicity itself. Honey dew does not exude at all; but is deposited on the upper side of the leaf, having fallen from aphides above, at any distance you like according to the height of the foliage overhead. This may be an inch or two, or thirty feet or more. If honey dew were an exudation from the plant, owing to too rapid transpiration, it would burst out from upper and under surface alike.

Edmund Thos. Daubeny.

NATURAL HISTORY QUERIES.

61. Destroying Wasps.—Wasps have been busily employed this summer in making their nest in a corner of my garden in North Brighton. I should be very glad if any of your readers could tell me how I may destroy these insects without injury to the nest itself, which I wish to preserve as a curiosity. There are, I have been told, several ways of taking wasps' nests, but what I should like to know is, which of these would be the best.

9, *Park Crescent, Brighton.* E. M. Nicholson.

[You do not explain whether the nest is in the ground or in a tree. In the former case the insects may be killed with damp gunpowder. See the October number of the *Royal Magazine*.—Ed. *N.N.*]

62. Glandular Absorption.—May I ask whether the flies that are caught by the tentacles of Drosera are absorbed into the plant through the

upper surface of the leaves in the form of gas, or in the form of solid or liquid matter? I take it that it is in the form of gas, and that there is an attraction in the plant that draws the gas in through the pores of the leaves, and that the skin and innutritious part of the fly is then cast off.

PETER HASTIE.

[Darwin's experiments seem almost conclusive in favour of the absorption taking place in a liquid form. The glands excrete a proteolytic liquid, so that peptonisation takes place on the exterior of the leaves; and the rapid effects, such as aggregation of protoplasm, produced by the application of artificial nitrogenous solutions, point to the peptones being absorbed by the glands of the tentacles and the papillæ and hairs on the blade of the leaf in a state of liquid solution. I have suggested that if the epithem tissue of the gland terminating the tentacle does thus act in an absorptive as well as in an excretive manner it is an important instance of reversal of function,—a phenomenon which physiologists are now beginning to recognise elsewhere. The indigestible chitinous portions of the insects may be easily seen lying on the re-expanded leaf: they are blown away by the wind, the leaf being at that time dry.—G. S. BOULGER.]

63. Stone Pine.—Captain Norman, of Cheviot House, Berwick-on-Tweed, writes: "I am very anxious to obtain evidence of the northern limit in England of adult specimens of the Stone Pine, *Pinus Pinea*, and shall be obliged for communications from northern counties.

[Loudon records a tree twenty-six years planted (in 1838) at Trentham, Staffordshire, as then 16 feet high; one at Finborough Hall, Suffolk, sixteen years planted and 18 feet high; and one at St. Mary's Isle, Kirkcudbright, fourteen years planted and 8 feet high. On the other hand, in Ireland, a specimen thirty-three years planted, at Glasnevin, was 20 feet high, and one sixty years planted in co. Down 45 feet high.—ED. *N.N.*]

SELBORNE SOCIETY NOTICES.

[NOTE.—ALL ANNOUNCEMENTS WITH REGARD TO FUTURE MEETINGS OF THE CENTRAL SOCIETY OR BRANCHES WILL BE FOUND TOGETHER AT THE END OF THESE NOTICES.]

Objects of the Society.—To promote the study of Natural History. To preserve from needless destruction such wild animals and plants as are harmless, beautiful, or rare. To discourage the wearing and use for ornament of: (1) The skins and furs of such animals as are in danger of being exterminated; (2) the skins and plumage of such birds as are not domesticated. To protect places and objects of natural beauty or antiquarian interest from ill-treatment or destruction. To afford facilities for combined effort in promoting any of the above or kindred objects.

New Members.—*Central Society.*—John Henry Crow, Esq., Notting Hill; Josiah Oldfield, Esq., D.C.L., M.R.C.S., Bromley; Alexander Paris, Esq., Brockenhurst.

Croydon Branch.—Miss E. Flint, Croydon.

Subscriptions.—The Council has great pleasure in acknowledging subscriptions of greater value than 5s. from the following Members: Samuel Gardner, Esq., £1 1s.; J. W. Treutler, Esq., M.D., 10s. 6d.; Mrs. J. W. Treutler, 10s. 6d.; Mrs. Phillips, 10s. 6d.; J. H. Barber, Esq., 7s. 6d.; C. H. Crawley, Esq., 6s.

Prizes for Junior Members.—The Council has decided to offer a prize of half a guinea each month, for the time being, to be competed for by members of Junior Branches (Associates of the Selborne Society) and young Members. As most schools had broken up for the holidays before the August number appeared, the Council has decided to extend the time for sending in essays until November 20. Details are repeated below.

Regulations for the First Competition.—A prize of half a guinea, offered by

the Chairman of Council, will be awarded for the best illustrated records of continued observations on an animal, or a plant, or on the relations between the two, made during the past year, by an Associate (member of a Junior Branch), or by an ordinary Member of the Society, under 21 years of age. All essays (written on one side of the paper only), illustrations or specimens (which latter must not involve the destruction of any rare creature), should be clearly labelled with the name, address, and *age* (which will be taken into consideration in making the award) of the competitor, and should be in the hands of the Honorary Secretary of the Selborne Society, at 20, Hanover Square, W., by November 20, 1905. All parcels to be securely packed and endorsed on the outside "First Competition."

For particulars regarding the formation of Junior Branches in schools and elsewhere, as well as of ordinary membership, application should be made to Wilfred Mark Webb, Honorary Secretary, 20, Hanover Square, W.

Excursions.—At the Meeting of the Council held on May 23, the following were elected to form an Excursions Committee (not to be confined to members of the Council): Mrs. Percy Myles, Mrs. Douglas Wilson, Mr. Avenell, Professor Boulger, Mr. Hunt, Mr. Hailes, Mr. Nash, Mr. R. M. Wattson, Mr. A. B. Wilkinson, Mr. Poole and Mr. Webb. The Chairman to be *ex-officio* a member.

Library.—The Honorary Librarian will attend at 20, Hanover Square, from 6 p.m. to 6.30 p.m. on the evenings when the Publications Committee meet (at present on the second Monday in the month), for the purpose of issuing books to Members.

FORTHCOMING EVENTS.

Indoor Meetings.

Business Meetings.—The next meeting of the Council will be held on Tuesday, October 24, at 5.30 p.m. The Publications Committee will meet on Monday, October 9, at 5.30 p.m.

Field Club Ramble for October.

Arrangements have been made for Selbornians to join the Essex Field Club in their annual Fungus Foray; as, however, the date is not yet fixed, Members wishing to take part must send a stamped addressed envelope, *at once*, to Mrs. Percy Myles, 7, Lincoln Street, S.W. Tea and expenses, 2s. 6d. each.

FIELD CLUB RAMBLES.

August 12.—From Tadworth station our Field Club walked over Walton Heath, through the village of Walton-on-the-Hill and then by field, meadow, and wood-paths to Headley. On the Heath were noticed the three usual species of Heather, viz., Ling, Bell and Cross-leaved. The noble expanse of bracken among the trees presented a fine sight. Some moths and caterpillars were taken by entomologists present. Our botanists reported *Papaver somniferum*, *Sedum Telephium*, *Verbena officinalis*, *Gentiana Amarella*, *Campanula glomerata*, *C. Trachelium*, and near Headley Church a good specimen of *Cichorium Intybus*. Tea was taken in the corner of a cottage garden, gay with flowers. Some pretty views were taken by photographers present, and a very pleasant afternoon was spent on this new walk.

September 2.—On this day we paid what is now become our annual visit to the Black Pond at Oxshott, and the fourteen Members who attended were favoured with most perfect weather. On arriving at the pond we were successful in finding a great variety of the bog-plants for which this locality is noted. As usual, *Drosera rotundifolia* was plentiful, but rather to our surprise *Drosera intermedia* was also found in great numbers. This latter is as a rule somewhat rare in Surrey. Marsh St. John's Wort, Marsh Pennywort, the Great Water Plantain, Cotton-grass and various rushes were also found. The heather was in full bloom on Oxshott Heath, and on our way to tea at Akerman's we saw one of the most splendid sunsets of the year, thus fittingly winding up a really delightful ramble.

September 9.—The Epping ramble had to be abandoned on account of the rain.

September 16.—A party of twenty-five joined Mr. Mühlberg in the now familiar ramble from Woldingham Station to Titsey Hill and Oxted. On the way alongside the noble sweep of Marden Park were noticed several of the superb Shire Horses, for the breeding of which Mr. Greenwell is renowned. Woldingham Churchyard was next visited, and the walk continued along the ancient Pilgrims' Way, from which the view is magnificent. The usual autumnal plants were again recognisedl, including *Atropa Belladonna* in its haunt on Botley Hill. The weather was perfect and permitted the enjoyment of an early *al fresco* tea. The day ended happily by the party arriving at Oxted Station in time for the 6.30 train.

September 23.—Woldingham Station was again the rendezvous for about a dozen Members of the Field Club. The wind blew cold on the Woldingham heights and the rain threatened but did not fall; so that it was a fine afternoon for walking. The quantity and colour of the Haws was much commented upon, some of the trees noticed being crimson and heavy with the masses of fruit. The time of the abundance of flowers was over; only a few sprays of honeysuckle, eyebright, heather, and hair-bell, trails of black bryony in fine foliage and fruit, and a late cluster of fine bramble flowers, from a bush on which blackberries were also to be had, being noticed. The way led by hill and dale to Worms Heath and some exceedingly pretty valley views were noticed along the path. Tea was furnished in the usual satisfactory manner at "The Bull" on Chelsham Common; and then some returned early, while others enjoyed a most delightful saunter through the twilight and starlight along the lovely valley path back to Woldingham.

ANSWERS TO CORRESPONDENTS.

E. N. Gibbs.—Botanists now generally recognise *Spiranthes* as a genus distinct from *Neottia*, so that *S. autumnalis* Rich., has replaced *N. spiralis* Sw. Having the census number 59 in the *London Catalogue*, occurring, that is, in 59 vice-counties out of the 112 into which Watson divided Britain, it may be termed uncommon.

Miss L. M. A. Giht.—(1) *Epilobium Fleischeri.* (2) *Saxifraga aizoides.* (3) Insufficient for determination.

Mrs. Needham.—*Mimulus Langsdorffii*, a native of Alaska, which has spread through the streams of Britain during the last eighty years.

1. All communications for NATURE NOTES must be authenticated with name and address, not necessarily for publication.

2. The return of an unacccpted contribution can only be guaranteed when it is accompanied by a stamped and addressed envelope. We cannot undertake to name specimens privately, to return them, or to reply to questions by letter.

3. All communications for any number must be in the Editor's hands by the 10th of the preceding month.

4. Communications for NATURE NOTES, books for review, specimens for naming, &c., should be addressed to the Editor, PROFESSOR BOULGER, F.L.S., F.G.S., 11, Onslow Road, Richmond, Surrey.

5. For the supply of the Magazine to others than Members, or for back numbers (except in the case of new Members), address the publishers, with stamps at the rate of 2½d. per number, Messrs. JOHN BALE, SONS AND DANIELSSON, Ltd., 83-91, Great Titchfield Street, London, W.

6. Letters connected with the business of the Society, subscriptions, and applications for membership, should be sent to the local Honorary Secretary, or to the Honorary General Secretary of the Society, WILFRED MARK WEBB, F.L.S., at 20, Hanover Square, London, W.

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Nature Notes:

The Selborne Society's Magazine.

No. 191. NOVEMBER, 1905. Vol. XVI.

SELBORNIANA.

Tintern Abbey.—The measures taken for the preservation of Tintern Abbey have made considerable progress, and the architect, Mr. F. W. Waller, in a recent report, brings the story up to date. The great east window presented the chief difficulty; but it was found that the walls and buttresses, the jambs and arch of the window, and the gable over, though much affected by weather, were on the whole fairly substantial, and not much out of the perpendicular, but the large centre mullion and the remains of the tracery in the head of the window were in a very dangerous state. After much consideration it was decided to reset the stonework, and renew the tracery, while at the same time adding to the stability of the whole. Repairs have been made at the transepts and aisles, and at the refectory, where is the reader's pulpit. It is announced that the important work to the sacristy, begun in 1904, has been safely and satisfactorily completed, as also that to what now forms the public entrance to the building. Several interesting discoveries have been made. Part of the foundations of the original building were laid bare, and the dwarf wall of the cloisters, as well as the foundations of what was apparently a small chapel at the western end of the south aisle, and of a galilee at the west entrance. The most pressing work still to be done is in connection with the eastern arch of the tower. This arch is much crippled and out of place, and its fall might be productive of almost irreparable damage.

The Swiney Lectures.—We are asked to announce that a course of twelve lectures under this endowment will be delivered at 5 p.m., on Mondays, Wednesdays and Fridays, commencing on November 6, in the Lecture-theatre of the Victoria and Albert Museum, South Kensington, by Dr. John

Flett. The subject of the course is the Geological History of Great Britain. Admission is free.

Infant Mortality among Penguins.—Great exertions are being made to protect the King Penguin and his taller brother the Emperor Penguin, from the extermination with which their value—when boiled down to make penguin oil—threatens them; and it would be tragic indeed if these strange birds, who survive an infant mortality of 77 per cent., should be rendered extinct by the greed of man. In the periodical circular issued by the Royal Society for the Protection of Birds, Dr. E. A. Wilson, of the "Discovery," whose drawings and photographs have done so much of late to popularise the Penguin, supplements the information he has already given by some remarks on the young of the birds. The great mortality among them is no mere guess, but the result of two years' observation, when the dead chickens in the sea-ice were actually counted before the rookery broke up at the beginning of the spring. It is surprising that the adult birds should be so abundant; for in a rookery which is apparently a going concern there is usually only one chicken to ten or a dozen adults, and each adult most anxious to nurse that one chicken—a condition of affairs which leads to disastrous quarrels for its possession. In these quarrels the chicken invariably suffers, and it is easy to find a rent or two in the skin of those that have succumbed to their ill-treatment. Dr. Wilson says that it is by no means an uncommon sight to see old birds nursing a dead chicken, so strongly implanted in them is the desire to sit and brood, and so often is the desire unsatisfied on account of the high mortality among chickens.

Preservation of the Malvern Hills.—An important step has been taken towards the preservation of the amenities of the Malvern Hills by the transfer to the Hills Conservators at Great Malvern, by Mr. R. W. Raper, of the rights which he purchased last year to quarry stone on the Herefordshire Beacon or British Camp, in order to prevent its disfigurement.

Re-afforestation.—The proposed afforestation of lands in this country is receiving much attention from agriculturists in East Anglia; for, where ages ago dense forests waved, there is now nothing but a fen or marsh. In the fen lands the possibility of making money from arboriculture has occupied the attention of some progressive farmers, who have profited from the cultivation of willows and similar quick-growing trees. The University of Cambridge is helping to give force and meaning to what might otherwise sound merely another theoretical panacea for the farmer, by the steps it is taking for the institution of a diploma in forestry. Landowners in the eastern counties have been approached, and several have offered the use of considerable areas of woodland for demonstration purposes. The

Duke of Bedford has promised the use of Woburn Woods, and the Crown Woods in Northamptonshire will also be available.

Relics of the Stone Age in Holderness.—The tide on the Holderness coast has recently ebbed to an unusual extent, and a succession of favourable winds have denuded the beach of shingle, so that the peat off Easington and the neighbourhood has been available for examination. A local antiquary, with two friends, while examining the peat, found evidence of a colony of lake-dwellings. The discovery is most interesting; and, taken in connection with previous discoveries at Ulrome and Sandley Mere, in the same neighbourhood, would seem to point to the presence of a colony of lake-dwellers in Holderness during the Stone Age.

The peat and clay examined off Easington were of distinctly lacustrine type, and the dwellings seem to be similar to those of Ulrome, with which the finder is conversant. Traces of a square platform were distinctly found, and one circular hut appeared to have been constructed by driving branches of trees down vertically, smaller branches being wattled or woven around the piles. There were also a number of large boulders, which had apparently assisted in making a foundation. One huge boulder bore the marks of glacial striation, most unmistakably. No pottery was found; but the bones of sheep, and it is thought the hare, were seen, as well as the shells of a bivalve of the scallop type, very like *Mya depressa*. The sub-structure of the dwellings appears to lie nearly due north and south. The wattling and wood were as soft as paste and could easily be crushed in the fingers. A large tract of peat, which was exposed, was full, apparently, of the remains of aquatic plants. The exact situation was seventy yards from the mainland, and some distance south of the village of Easington. Diligent search was made for pottery or implements while the ebb tide allowed, but none could be found.

The same party also discovered remains of a "kitchen-midden" in the cliff near Out Newton. Here oyster shells bearing the distinctive mark of having been opened by some form of three-cornered implement were found. They were of a very early type, and very much perished, more so than those found in the middens on the riverside at Kilnsea. One or two bits of pottery were found here, and bones of the sheep and ox. The layer of oyster shells exposed was about four inches thick and about four feet below the present surface.

VICISSITUDES OF MEAN DAILY TEMPERATURE THROUGHOUT THE YEAR, &c.

By E. G. Aldridge, F.G.S., F.R. Met. Soc.

THOUGH the Reduction of the Greenwich Meteorological Observations, 1841-1890, Part III., has long been published, I am not aware that any attempt on a fairly large scale has been made to extract from it information which may be both useful and entertaining. I venture now to offer, for the use of the readers of your periodical, some interesting statements which I have prepared from a study of the figures given in Tables IX., XI., and XII. of the volume above referred to. In Table XII. the temperatures are those derived by taking the mean of the daily maximum and daily minimum, 1841-1890. Tables IX. and XI. contain the mean daily maximum and the mean daily minimum temperatures after they have undergone the "smoothing" process which was found desirable at Greenwich Observatory in order to lessen the many irregularities existing in Table XII., notwithstanding that observations were made during the lengthy period of fifty years. From these two tables I prepared a third, showing the mean daily temperature. Only one place of decimals was used; and when the figure in the second place was "5," it was rejected. The "smoothed" values represent, I suppose, what would have been the result if observations had been taken since (let us say) the time of Magna Charta, or during some other very extended period, the climate, of course, remaining unchanged. It will be understood that the temperatures are in degrees Fahrenheit, and that all of them, unless otherwise stated, are *mean* temperatures. The 29th of February is not dealt with.

"Unsmoothed" Values.	"Smoothed" Values.
Table XII.	*From Tables IX. and XI.*
January.	
The month opens with a mean of 37·9°. The 3rd, 4th, and 5th show an increase of about 05·°. On the 6th the temperature falls to 37·7°, and remains near that point till the 12th, when the value is 37·0°—the lowest of the whole year. The next day shows a rise of 0·9°; and on the 19th the mean is 38·8°. On the 21st, however, the temperature falls to 37·3°, and is nearly as low as that of the 12th. On the 22nd it is 38·0°, and on the 23rd 38·7°; and there is now a somewhat interrupted increase till the	The month opens with a temperature of 38·2°. The differences from day to day are small; and there is a practically continuous drop to 37·7° on the 10th and 11th (the coldest days). After these, there is an almost unbroken rise to 39·8° on the 31st (the warmest day). From the 19th to the 22nd a slight incidence of cold is indicated. Range during the month, 2·1°.

end, the 31st showing a mean of 40·5°—the highest of the month, and nearly the same as that of March 11! Range during the month, 3·5°. Mean of the month, 38·37°.

February.

The temperature of the 1st is 39·7°; and there is no great change till the 5th and 6th, when 40·2° and 40·5° occur. The mean keeps constantly below 40·0° until the 14th, when 40·1° is reached, the total fall being as much as 2·7°. The next four days are still milder; but relative cold sets in on the 19th (39·9°) and continues for three days. During three of the next four, the mean is well over 40·0°; on the 26th (the warmest day) it is 41·2°, followed by a sharp fall of 0·9° the next day. The 28th has a temperature of 40·7°. The coldest day is the 11th (37·8°). Range, 3·4°. Mean, 39·80°.

The 1st is very slightly colder than its predecessor. The temperature remains steady at about 39·8° until the 7th, when a fall sets in, and on the 11th the mean is 1·2° lower. This is the coldest day of the month. From now to the end the rise is fairly continuous, though interrupted from the 18th to the 22nd by a total descent of 0·25°. The warmest day is the last (40·7°). Range, 2·1°.

March.

Opens with 40·2°; but the temperature rises the next day by one degree. The values now vary from 41·0° to 42·1° till the 8th (42·0°). On the 9th, 10th, and 11th a colder period is shown, 40·6° being again reached. From the 14th to the 20th the temperature oscillates between 41·7° and 42·8°. On the 21st and 22nd a colder period is again shown, with a mean of 41·4°; but against the 23rd 42·7° is recorded. There is now an almost unbroken rise till the 31st (45·8°). The first and last days are respectively the coldest and the warmest. Range, 5·6°. Mean, 42·36°.

Opens with 40·7°, after which there is a steady rise to 41·6° on the 6th and 7th. 41·7° is reached on the 14th, but the intermediate days are colder, showing a total fall of 0·4°. The temperature remains at about 42·0° and a little over from the 15th to the 22nd, after which a rise takes place and continues without a break until the end. The coldest day is the 1st; the warmest is the last (45·8°). Range, 5·1°.

April.

The temperature of the 1st is 46·0°. There is an almost continuous rise till the 7th (47·7°). "Blackthorn Winter" appears to be shown by the values of the 9th, 10th, and 11th, and partially so by those of the 12th, 13th, and 14th. During these six days the mean falls as low as 45·6° on the 11th

The mean of the 1st is 46·1° (the lowest value). On the 5th and 6th 47·2° is recorded. A fall happens on the 7th; and 47·0° is not reached between the 8th and the 13th (inclusive). The values of the 10th and 11th are 46·4°, and are not much higher than that of the opening day. After the 13th, a rise,

(the coldest day). On the 15th 48·1° is attained, and 50·1° on the 20th (the warmest day). A considerable fall now occurs; and a second and mitigated "Blackthorn Winter" is revealed on the 24th, when the mean is 48·7°. 50·0° is reached again on the 30th. Range, 4·5°. Mean, 48·09°.

little broken, follows to 49·8° on the 30th (the warmest day). No advance is made on the 20th and 21st, and but a trifling one on the 22nd; while a slight incidence of cold is observable on the 23rd and 24th. Range, 3·7°.

May.

May 1 makes no advance on the last day of April; but the rise after that is fairly continuous all through the month. A little relative cold occurs on the 4th, 7th, 8th, 14th, 17th, 18th, 29th, and 31st. The month closes with a temperature of 56·8°, but on the 30th (the warmest day) 57·3° is recorded. No correspondingly high maximum is found, though 87·0° is discovered as early as the 19th (1868). On the 30th, in 1895, 86·2° was registered; but this date is outside the series of years dealt with. The coldest day is the 1st. Range, 7·3°. Mean, 53·92°.

This month commences with an average of 50·0°, the mean daily maximum and minimum being 10·1° and 10·0° higher and lower respectively. There is an absolutely unbroken rise to 57·6° on the 31st. Range, 7·6°.

June.

This month commences with a value of 57·5°, and there is an increase of 1·6° the next day. The temperature is now constantly above 59·0° till the 9th, when 58·9° is reached, and this relative cold continues for three days. On the 13th 60·3° is attained, but relative cold is again shown on the 15th, 17th, and 18th, the temperature falling to 59·4°. On the 19th the mean is 60·4°, and 62·3° on the 22nd. 62·8° is registered against the 27th, and this is the hottest day of the month. The 30th is much less warm (61·8°). The coldest day is the 1st. Range, 5·3°. Mean, 60·36°.

The month opens with 58·0°. On the 6th the temperature is 59·3°, after which there is a slight decrease, lasting till the 10th. 59·3° is resumed on the 11th; and a continuous ascent to 62·3° on the 26th and 27th is a feature of the month. There is a slight incidence of cold on the last three days. The 1st is the coldest day; the warmest are the 26th and 27th. Range, 4·3°.

July.

Opens with 61·0° (the lowest value). On the next day the temperature is 62·4°, and on the 3rd 63·3°. Till the 8th the means are continuously above 63·0°, with an average of 63·4°, but on this day there is a sudden drop to 62.6°.

Commences with 62·3° (the lowest value). On the 5th and 6th 63·2° occurs. The next four days are not quite as warm. The temperature rises from 63·3° on the 11th to 64·3° on the 15th and 16th, the former being fractionally the hotter.

With the exception of the 11th (62·5°), there is now an unbroken rise to the 15th, which is distinguished as the hottest day of the whole year, its value being 65·2°. (On this date, in 1881, the maximum temperature is 97·1°). On the next day, however, the mean is only 64·1°. The temperature may now be regarded as fairly steady at about 64·0° (except a drop to 63·6° on the 19th, and a rise to 64·7° on the 22nd) until the 24th, when a fall of 0·8° takes place, and the values never again rise to 64·0° during the month, though they reach 63·8° on the last two days. (The 22nd, in 1868, has a maximum of 96·6°). The period from the 23rd to the 26th is usually wet. Range, 4·2°. Mean, 63·57°.

These are the hottest days of the year. It is noteworthy that whereas in the "unsmoothed" tables the difference between the means of these days is as much as 1·1°, in the table containing the "smoothed" values there is practically no difference at all. It will also be noticed that the mean of the hottest day is 0·9° less in the latter than in the former. The 17th is nearly as hot as the 16th and 15th; and then a steady fall begins, and continues till the 27th, when the value is 63·4°. The remaining days are slightly warmer. Range, 2·0°.

August.

August 1 has the same temperature as that of July 31. On the 2nd and 3rd the mean is much lower, falling to 62·7 on the 3rd. A rise then takes place; and the 7th and 8th, with their average of 64·3°, are nearly the warmest days of the month. The next four days are cooler; on the 10th the mean is but 63·5°. The hottest day of August is the 13th, with a temperature of 64·5°; but after this a considerable loss of heat takes place. [On the 13th, in 1876, the maximum in London (Brixton) was about 96°]. The 14th and 15th, with their mean of 63·7°, appear to delay for a time an important diminution; but after these there is a fairly steady fall until the 23rd, whose temperature is 61·6°. The 26th, 27th, and 28th are warmer, and have an average of 62·3°. The last three days of the month have a mean of only 61·2°. The 31st is the coldest day (60·9°). Range, 3·6°. Mean, 62·91°.

The month commences with a mean of 63·5°. The 2nd and 3rd are slightly cooler. 63·5° is resumed on the 4th, followed by a rise to 63·9°, which lasts from the 8th to the 11th (inclusive), the 8th being fractionally the hottest day of the month. If the figure in the second place of decimals be "thrown up," the temperature becomes 64·0°. On the 12th and 13th the diminution of heat is but small. 63·7° occurs on the 14th, after which there is an almost continuous descent to 61·1° on the 31st (the coldest day). Range, 2·8°.

September.

During the first week the temperature oscillates between 61·1° and 60·0°, the former happening on the 3rd, the latter on the 7th. The 3rd is September's hottest day. The mean of the 8th is 59·7°; and 60·0° is no more met with to the

The average of the 1st is 60·9°; that of the 30th is 55·2°. There is absolutely no check to the fall of temperature during the month. Range, 5·7°.

close of the year. The temperature falls with fair regularity until the 30th (the coldest day), whose average is 55·1°. A little relative cold is shown on the 11th (58·7°), and a little relative warmth on the 15th, 16th, 17th, 22nd, 24th (56·4°), and 28th (56·2°). On the 24th, in 1895, the maximum temperature reached the extraordinarily high point of 87·3°; but this date is outside the series of years dealt with. The maximum temperature was over 80·0° on six consecutive days, viz., from the 23rd to the 28th; and the mean daily maximum of this period was 83·3°! It is doubtful whether similar cases of exceedingly high maxima happening so late in September have occurred within "living memory"; and these instances may well have been mentioned in my article on "Seasons" as affording remarkable exceptions to the rule that very few high maxima occur after September 22. Compare this hot weather with the wintry character of September 30th, 1905, on which day, at 8 p.m., the temperature at Oxford was only 45°! Range, 6·0°. Mean, 58·24°.

October

Commences with 55·4° (the highest value), followed immediately by a fall of 1·3°. The temperature remains at about 54·0° till the 6th, when it is only 52·8°. The next day it is again 54·3°, followed by a drop of 1·1°, and this is succeeded by a further diminution of 1·6°. An increase is observable on the 10th (52·1°). This is followed by falls of 0·3° and 0·6°, after which the temperature is nearly stationary for a week, with a mean of 50·2°, the 18th, however, having a value of only 49·7°. 49·4° is reached on the 20th: then follow four nearly steady days with an average of 48·6°. 47·6° occurs on the 25th, and 47·5° on the 28th; but the 26th, 27th, 29th, and 30th have values differing little from 47·0°. The last day of the month is distinguished by a rise to 47·8°. The coldest day is the 29th (46·7°). Range, 8·7°. Mean, 50·49°.

Opens with 54·9°. The mean of the 31st is 47·0°. There is absolutely no check to the fall of temperature during the month; but during the last five days the rate is slackened, and the average value of the five days is 47·2°. Range, 7·9°.

November.

The warmest day of the month is the 1st, with a temperature of 47·0°. On the 2nd and 5th the average is 46·6°, with a cooler interval. After the 5th the diminution of heat is fairly steady until the 17th, by which time there is a loss of 5·5°. Relative warmth is shown on the 14th (43·1°). From the 18th to the 23rd (inclusive) there is an increase, though the 21st (41·7°) is considerably cooler than its immediate neighbours. The mean of these six days is 42·2°. From now to the end the decrease is fairly steady, but with a rise to 42·5° on the 26th. The temperature of the 30th is only 40·0°, and this day is, of course, the coldest. Range, 7·0°. Mean, 43·20°.

The mean of the 1st is 46·8°; that of the 30th is 40·4°. There is practically little check to the fall of temperature during the month; but the descent is arrested between the 17th and the 18th and between the 20th and the 21st, and is slow from the 22nd to the 26th. Range, 6·4°.

(*To be continued*).

REVIEWS AND EXCHANGES.

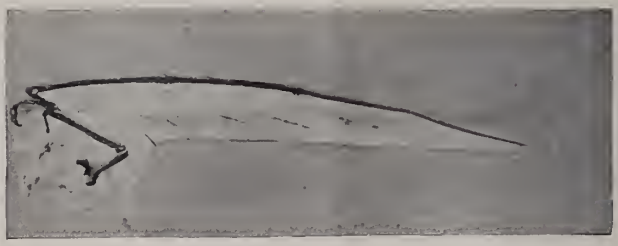
Travels of a Naturalist in Northern Europe. By J. A. Harvie-Brown. 2 vols. T. Fisher Unwin. Price £3 3s. net.

Ornithologists, sportsmen and lovers of travel, will delight in these two sumptuous volumes of Mr. Harvie-Brown's diaries. True, they may seem somewhat belated in their appearance, since they narrate his travels in Norway in 1871, round Archangel in 1872, and to the Petchora in 1875; but he practically confines himself to his own adventures and observations, so that work done by others since those dates does not much affect the value of this first-hand record. To one who has gone over some of the same ground, who has watched the Hooded-Crows acting as scavengers in the Market at Archangel, and has eaten the delicious Raibchik there, and the equally delectable Maroshka jam—the very existence of which a Russian merchant in London once flatly denied on our asking for it—it is of especial interest to read these unaltered diaries of a first-rate observer. Among Mr. Harvie-Brown's chief objects in his journeys, were the nesting-places of the Grey Plover and the Little Stint, and he gives us two beautiful coloured plates of the eggs of these birds. Though mainly ornithological, his notes do not ignore mammalian life, and plants are mentioned, generally in connection with the nesting of birds. In this connection occurs the only misprint we have detected in these admirably got-up volumes viz., the dwarf Rhododendron, *Ledum palustre*, several times mentioned as *Sedum*. Mr. Harvie-Brown's reputation as an ornithologist is sufficient guarantee for the care and accuracy of the matter generally, and he gives us full lists of the birds collected in the various expeditions. Besides a number of portraits from photographs, of the author and his companions, and a series of route-maps, the journals include sketches of traps, harness and implements, mainly illustrative of a detailed ethnological appendix on the Samoyèdes.

Wild Wings: Adventures of a Camera-hunter among the larger Wild Birds of North America. By H. K. Job. With an introductory letter by Theodore Roosevelt. With 160 illustrations after photographs from life by the Author. Archibald Constable and Co. Price 10s. 6d. net.

This American work is an admirable example of the new sport. The photographs are excellent and the title is so far borne out that those of birds on the

A.



B.

C.

PHOTOGRAPHS OF THREE WINGS FOR COMPARISON OF THEIR STRUCTURE.
A, that of a Pterodactyle; *B*, that of a Bird; *C*, that of a Bat.

(From "Extinct Animals." By kind permission of Messrs. Constable.)

wing are amongst the most numerous and the best. One suggestion we would make—an appeal, in fact, from Europe to America—in view of a subsequent edition, and that is, that the scientific names of animals and plants should be added. This is no question of mere pedantry: it is absolutely necessary, if we on this side of the Atlantic are to fully comprehend our friends' meaning. In the light of some letters which have reached us, *apropos* of the recent murder of a warden, we think that it cannot be too widely known that the killing of the White Herons—the source of the so-called "aigrettes" or "ospreys"—is forbidden by law in the United States. These species and others allied to them, however, breed also in Central and South America, where they are not protected. Mr. Job, like everyone who has been on the spot or obtained information as to the facts of this "plume" traffic at first hand, uses strong and decided language as to its infamy. "This is," he says, "one of the moral questions—to be classed with the opium traffic and the slave trade—to which there is but one side."

Extinct Animals. By Professor E. Ray Lankester. With 218 illustrations. Archibald Constable and Co. Price 7s. 6d. net.

The lectures adapted to a juvenile audience, delivered for many years past at the Royal Institution by the most able exponents of science, have long ago demonstrated that popular science, science, that is, made intelligible to all, is by no means necessarily inaccurate, as used to be supposed. Professor Lankester, the Director of the Natural History Departments of the British Museum, affords us in this work an admirable illustration of this fact. He has utilised the unrivalled opportunities of his position to give his young hearers the very latest results of palæontological research, not only drawing upon his own many-sided zoological labours, on the Feather Star-fish, the King-Crab, the Old Red Sandstone Fishes, and the Okapi of the Congo forests, but also describing the results of Dr. Andrews' digging in the Egyptian Fayum and Professor Amalitzky's disinterring of *Pariasaurus* from the Triassic cliffs of the Northern Dvina. His facts are more marvellous than most fairy tales; but the value of the lectures as given, and of the book as a most attractive introduction to geology, consists rather in the way in which he inculcates imperceptibly the method of scientific reasoning. Five invaluable illustrations tell afresh the instructive story of the so-called Serapeum at Puzzuoli, just as the three, which, by the courtesy of the publishers, we are able to reproduce, teach the meaning of analogy and homology in comparative anatomy. The volume has as a frontispiece an excellent portrait of the author; and, considering its wealth of illustration, is, in our opinion, a remarkably cheap one.

The Uses of British Plants, Traced from Antiquity to the Present Day, together with the Derivation of their Names. By the Rev. Prof. G. Henslow. With 288 illustrations. Lovell, Reeve and Co. Price 4s. 6d. net.

Our esteemed Vice-President has given us in this volume a veritable *multum in parvo*. Etymologies of the Latin and English names, taken from the two best sources, the late Mr. Randal Alcock and Dr. Prior, are followed by summary accounts of uses ancient and modern, real or imaginary, culled from Theophrastus, Pliny, the Herbals and other sources; and illustrations, selected, we think, from those prepared by Messrs. Fitch and Worthington Smith for Bentham's Flora, are also given. The arrangement is systematic; but there is a tolerably full index of names, so that the little handbook of less than 200 pages should prove a useful companion to the merely descriptive floras and an interesting book of reference to the student of economic botany.

I go a-Walking. Compiled from "British Birds and Their Haunts," and other Works, by the Rev. C. A. Johns. Illustrations from photographs by Charles Reid, Wishaw. Part I., Through the Country Lanes. With thirty illustrations. Part II., Through the Meadows. With twenty-four illustrations. T. N. Foulis. Price 6d. each part, net.

We congratulate Mr. Reid and his publisher on a happy title for a good idea. The work is planned for two volumes, each containing three sixpenny parts,

AN ANGLER'S HAUNT: THE MEDWAY, YALDING.
(From "Fishes I have Known." By kind permission of T. Fisher Unwin, Esq.)

each part dealing with the birds and beasts of a different habitat. The perfect reproduction of the splendid photographs necessitates a highly glazed paper, but the type is excellent and the extracts selected are generally judicious. White's Selborne appropriately leads the way; and, though birds predominate, chapters on the Hedgehog, the Hare, the Rabbit, the Stoat and the Weasel, from Mr. Carruthers Gould (who honours us by borrowing our title for his columns in the *Westminster Gazette*), show that other animals are not ignored. We look forward to the completion of the series.

The Horniman Museum. A Handbook to the Marine Aquarium. London County Council. Price 1d.

Another perfect little museum-handbook for a penny! We are told how to build and how to aerate a marine aquarium, and then all the chief animals which can be kept in it are described, all technical terms employed being carefully explained. Finally a list of books in the Museum Library dealing with the subject, forms a very adequate bibliography. Might we ask that, for those who cannot visit Forest Hill, the prices of these books be given in a future re-issue?

The Nature-Study Review for July maintains the improving character of the Review. We notice articles on the Silkworm and Protective Colours of Animals, but in general we think the tone is too methodological. We should like to see more suggestions for lessons and actual lessons learnt, more Nature-study and less talk round about it.

Fishes I have Known. By Arthur H. Beavan. T. Fisher Unwin. Price 5s.

Fishes do not sing to us, and they can hardly be said to be domesticated. They can apparently be captured and killed without the infliction upon them of much, if any, pain; and thus, though in this, as in previous volumes, Mr. Beavan's knowledge largely implies killing, this book has repelled us less than did its predecessors. As before, he narrates Australian and South American experiences; but nearly half the volume, and by no means the least interesting half, is devoted to British fishes. Various charming haunts of the writer from his boyhood onward are lovingly described, one of which we are allowed to reproduce here, and the book ends with a gossipy chapter of anecdotes of fish-eating in the past.

The American Botanist for September contains several interesting articles and paragraphs, such as those on Devices for Plant-protection, the Extermination of *Galax*, the Tumbleweeds—about which we should like to hear more—and the wilting of flowers when gathered by some people more than when gathered by others.

The Naturalist for October, an exceptionally good number, contains, among other things, a well-illustrated article on Pond Vegetation.

Received: *Board of Agriculture and Fisheries Leaflet*, No. 140; "*The Felted Beech Coccus, Cryptococcus fagi*"; *The Plant World* for August; *The Victorian Naturalist* for August and September; and *Nature Study*, *The Irish Naturalist*, *The Animals' Friend*, *The Animal World*, *The Parents' Review*, *The Agricultural Economist*, and *The Estate Magazine* for October.

NATURAL HISTORY NOTES.

296. Mongoose and Cobra Fights.—I have several times seen the contests between mongoose and cobra in India alluded to by the Rev. E. T. Daubeny, and always with the results he mentions; but I cannot recall an instance of the snake striking, as it must do to be fatal, with its mouth expanded. The strikes seemed mostly to be feints, and I rather doubt the snake's attempting to bite with other teeth than the poison fangs, which are not placed very far back in the jaw but are curved rather backwards when at rest.

On these occasions the beaten snake, at times with its head apparently chewed to pulp by its adversary, was carefully returned to its basket by the *Sampwallah*. The reason for this was found, on inspection some short time after one of these fights, to be that the plates of the snake's head were being rearranged in their places, it being still alive and likely to survive to fight another day.

As to the supposed immunity of the mongoose from snake-poison, which is a popular fallacy, it has been stated that such an exemption does exist in the case of the pig, an animal that will seek and pursue snakes among the rank growths of prickly pears often edging an Indian compound, eating them with avidity when caught.

Veytaux, Switzerland. A. B. WYNNE.

297. The Gannet.—In August last a very rare bird, the Gannet or Solan Goose, was captured near Holme Island in Morecambe Bay. It measured 6 feet from tip to tip of wing. It was taken to Grange Station on its way to Ulverstone to be stuffed, and caused much amazement and conjecture on the platform, no one having any idea what it was. According to the *Westmorland Gazette*, "This is only the second specimen that has been taken round Holme Island. There was one taken near Wisbech, Cambridgeshire, in 1843, also one shot in Fulburn Fields, Cambridgeshire, in 1852, and another near Swinhope House, Lincolnshire."

Although the home of these birds is in the Firths of Forth and Clyde, Ailsa Craig and the Orkneys, I do not think they are as rare in this Bay as is supposed, but that they are not noticed. About a year ago I saw one causing a commotion among some gulls. Again yesterday, while cycling to Humphrey Head, a fine limestone cliff projecting into the Bay about 4 miles seaward of Holme Island, I came across another lying dead on the side of the lane leading to the shore. This one measured 6 feet 4 inches from tip to tip of wing, and 4 feet from beak to tail. A man in the little fishing village near had seen the August capture and had been able to satisfy the local curiosity about this one. Thus three have been recorded within the last year. The Bay is greatly frequented by gulls. I have also often seen six or eight herons at a time solemnly surveying the waters of the River Kent, which at low tide runs over some eighteen miles of sand to the Irish Sea. Twice in the twenty-four hours the bore or tidal wave sweeps up this wide estuary, sometimes with great rapidity. It was a very real danger in the olden days when the only communication with the South was by mail coach across the 10 miles of sand to Lancaster.

Grange-over-Sands, Lancashire, October 9. R. C. LOWTHER.

298. Birds in the Field and Garden.—I have read with much interest the paper on this subject by "East Sussex," but I fear that while pleading the cause of our friends, the birds, he has not in some instances adequately presented the case alleged against them. As to tits, for example, the well-known veteran naturalist, Mr. Tegetmeier, has repeatedly charged them with pecking holes in his choicest pears, to their utter ruin, the wet getting in and causing them to rot.

As to finches, it was new to me to hear of the linnet being classed as mischievous; but the lasting injury done by bullfinches and greenfinches to our gooseberry-bushes is not a small matter, and I have been assured by a competent observer that the choicest kinds suffer most from their attacks.

"There is but one grievance," says "East Sussex," "which the farmer cherishes against the lark." Is this so? I have certainly heard him accused of eating wheat as well other seeds. I should like to hear more of the "lands where the destruction of useful birds has been allowed to go on till it was too late." In France, notoriously, small birds are far more scarce than in England, yet English fruit-growers continually lament the quantities of French fruit sent to English markets at low prices. It is a pleasing theory that if you exclude birds from your fruit, you will lose more than you will gain, but is it borne out by facts? I think more evidence is wanted as to this.

As to rooks, lapwings, owls, and kestrels, I am in the fullest agreement with "East Sussex."

"ADVOCATUS DIABOLI."

299. It would be an excellent thing if the paper of "East Sussex" on "Birds in the Field and Garden" were separately printed for distribution amongst farmers, gamekeepers, and others. Being a resident in that part of the county, I feel sure that what he writes may do much good, and combat the persistent notion that birds of every, or almost every, kind are to be exterminated as mischievous and nothing else.

In this neighbourhood rats and mice are a perfect plague, and in the spring-time they do far more harm in my garden than any amount of birds, without the compensating advantage of destroying insects, grubs, and worms at all periods of the year. My Irish terrier does his best to keep them down, and accounts on an average for about two mice a day and two rats a week, but that goes only a little way. The other evening I met a farmer endeavouring to shoot the rats, which he spoke of as a constant and serious trouble. When I said, "I wish people would leave the owls alone, for they are the best rat- and mice-catchers," he replied, "So I've heard say." But as for an owl or a kestrel, neither of them is ever to be seen, although the under-keeper of the principal game-preserver of these parts once assured me that orders were given not to shoot the owls. He added that, personally, he had never known an owl interfere with young pheasants.

It is long since I saw a kestrel. It was in Herefordshire. The bird was dying by inches, as it hung by the leg from one of those detestable pole-traps which happily are now illegal. I do not think I am "sentimental," but the expression of that bird's eyes has haunted me ever since. He was a "hawk," however, and that was enough to sign his death-warrant, poor thing!

Buxted, Sussex, A. L. H.
October 7, 1905.

300. **Belated House Martins.**—Numbers of these birds prolong their stay here till winter cuts off the supply of insect food and they die of cold and starvation. A neighbour once showed me the contents of the martins' nests round his house at Christmas time, which consisted of fifty or sixty full-fledged young birds that had retired to die in the homes where they were born. It is interesting to try and trace the causes of their remaining here when the rest are gone. In most cases the belated birds are believed to be the second brood which the old ones deserted when the time for the autumn migration had arrived. Though old enough to seek for food, they were too young to take warning from their elders, and not sufficiently educated to see the danger of remaining here. The young of many British birds migrate by themselves, without a guide, a few weeks after they have left the nest, and arrive in some distant land where their parents join them a couple of months later. It would appear that previous to setting out on their first journey they are fully instructed by the old ones in what they have to do, and where they are to go. If, however, they are deserted by their parents before this knowledge is acquired they are unable to find their way across the seas to other lands, and generally die without attempting to leave their native land at all.

October, 1905. EDMUND THOS. DAUBENY.

301. **Clouded Yellow Butterflies.**— In the *Country Side* of September 9, it is said that the occurrence of the Clouded Yellow (*Colias edusa*) "is the direct or indirect result of immigration from abroad. At any rate it must be very rarely indeed that its sensitive caterpillar can live through an English winter; nor is there any evidence to support those writers who maintain that the butterfly itself hybernates in Britain. We may, in fact, feel assured that but for the wind we should never see the Clouded Yellow in England at all."

In regard to these statements I cannot help thinking them entirely mistaken. They are quite contrary to my knowledge and experience. For nineteen years I lived close to Portsdown Hill, where Clouded Yellow butterflies could be taken year after year in abundance in the autumn, and where I have often seen

hybernated specimens. Clouded Yellows hybernate like the *Vanessidæ* and Brimstone, like them they pair in the spring, and then lay their eggs. From these the perfect insect appears in the autumn.

In proof of this let me say that on Portsdown Hill years ago I saw a *hybernated specimen* of the Clouded Yellow (*Colias edusa*) lay an egg on a clover leaf *one spring*. This leaf I picked with the egg on it. I then caught the butterfly, which I took, leaf, egg, and all, to my neighbour, the late Mr. Wm. Buckler, the entomologist, whose drawings of insects were some of the finest I have ever seen, and whose collection of British Lepidoptera is now, I believe, in the possession of the Ray Society. Mr. Buckler put the butterfly under a bell glass, with some clover planted in a pot, on which she laid a quantity of eggs. I saw the caterpillars raised from these eggs, and a number were liberated. *Ab uno disce omnes*. After experience such as this no hybernation of the "sensitive caterpillar"; no theory of "immigration from abroad"; no aid from wind to blow the perfect insects over from the Continent, are necessary to account for their occurrence in this country.

EDMUND THOS. DAUBENY.

302. Destroying Wasps.—More ways than one of taking wasps nests are mentioned, and fully described, in the pages of one of the summer issues of the *Fishing Gazette* for the present year (1905), published at St. Dunstan's House, Fetter Lane, London.

A. B. W.

303. Humming in the Air.—This question has been ventilated of late in your columns, with the usual result in such matters, that some stick to one opinion as to its origin, and others to another. I have been honoured by my ideas—given in NATURE NOTES—appearing now and then in other periodicals.

We have just had a spell of cold easterly winds, ending with a downfall of much needed rain. Next day, September 26, I heard the well-known hum all round, above and over the tops of the trees, and, as usual, looked around if by any chance the cause would declare itself. I searched everywhere for bees, but they were not in evidence. Above my head, however, and apparently in every direction, flies of different kinds, and other winged insects, were disporting themselves. Ten feet from the ground, and as high as I could see them, flies were playing with each other just as the house-fly does in our homes. Other and smaller flies in quantities, many no larger than winged aphides, were flying aimlessly backwards and forwards, apparently for mere pleasure, and enjoying the return of more genial warmth. Who can say that these were not the cause of the pervading hum? Methinks they were. It is rather late in the year for this humming, which lasted but a short time; and the insects were much lower down than is their habit in the height of summer.

September 27, 1905. EDMUND THOS. DAUBENY.

304. Honey Dew.—Mr. E. T. Daubeny again misrepresents me. I did not say that the "paving stones were in the open and away from the influence of trees." They were directly beneath the maple and lime trees that I alluded to, from the leaves of which the honey dew was pouring. It stained the pavement beneath black. It was visible in my road for several days in the summer of 1904. It could be seen in several different places, but there was more under the maples (sycamore) than under the limes. I have seen honey dew fall on the pavement on many occasions previous to that. Mr. Daubeny says truly that honey dew is very sticky and very sweet. The presence of sugar in it is unmistakable. When it first exudes it is more liquid than it is afterwards. Mr. Daubeny is wrong if he means to say that honey dew comes from "a fir tree, a laurel, or a cabbage." Nor have I ever seen it on an "oak." It is certainly not found on the plane, poplar, or beech. There is no doubt that honey dew from different plants varies as much as sugar from different plants varies. It would be very difficult to tell the difference. Maple contains a great deal of sugar. The sweetness of lime trees is noticeable in the scent of the blossom. I believe that the starch first turns into sugar, which afterwards ferments and forces its way through the upper surface of the leaves. Miss K. M. Hall suggests, in your August number, that honey dew

only appears in abundance in bad flowering years, and that in those years the sugar (or starch), which should have been used in producing pollen, and in fructifying the seed ovules is left in such excess that it has to be got rid of through the leaves. This is a theory which is worthy of the attention of all who take an interest in botanical natural history, and I believe it will be found to be true. I hardly ever knew the blossoms of the maple and lime to be so profuse as they have been this year, and I have seen no honey dew on either of them.

Hampstead, PETER HASTIE.
September 4, 1905.

305. A good deal of correspondence has appeared in your paper on the subject of "honey dew" on lime trees. Perhaps a few notes on currant trees may be of interest. My observations were commenced on June 3 of this year. By that time the honey dew was covering the leaves of the currant trees in its greatest abundance, and continued in large quantities till about June 11. On the 14th it was scarcer, and had materially decreased by the 16th, although the weather had been very hot. It covered the upper surfaces of those leaves which were overhung by other leaves. The leaves at the top of the trees, and those not overhung, were *quite free* from honey dew. Rain had little effect on the affected leaves, dulling the surface, but not washing off much of the viscid matter. The honey dew, as I repeatedly noticed, was always most abundant underneath those leaves where aphides were most thickly congregated, and was never found where there were no aphides. Now as regards the aphides. They were most abundant about June 3 to 6, and decreased after this, till by June 18 they were very scarce. This decrease in numbers I attribute to the increase in the number of their natural enemies, chiefly lady-birds and their larvæ, and larvæ of the Syrphus flies. Spiders, also, account for not a few. By July 19 all the aphides and honey dew had disappeared from the leaves, which were falling off. The honey dew is greedily sipped up by flies, Blue-bottles (*Calliphora*), Green-bottles (*Lucilia*) and others. Once I found a hive bee sipping it early in the morning. Ants also enjoyed the feast, especially on June 8. When the honey dew decreased in amount, the ants no longer sipped from the leaves, but were to be found on the undersides of the leaves, "milking" the aphides, and this seems to point to the fact that honey dew is the accumulated secretions of aphides.

Elmlea, Ebley, near Stroud, R. H. ROGERS.
August 31, 1905.

306. Roman Snails.—On a recent visit to the Shrewsbury Museum I was surprised to see a tray of snail shells from the neighbouring Roman city of Uriconium, labelled *Helix pomatia*, which were all *H. aspersa*. On subsequently visiting Uriconium I was shown others, and was informed that they were met with in great numbers during the excavations, and were occasionally found imbedded in the ancient mortar. All I saw were *H. aspersa*. The portion of the city as yet excavated consists of part of a civil basilica or exchange, and the public baths with some contiguous shops. As many bones of animals used for food, with shells of oyster and whelk (*Buccinum undatum*), have also been found, it is probable that the *Helix aspersa* was also so used. This species has been stated to be, like *Helix pomatia*, of Roman introduction, and it is, I believe, doubtful if either species has been found in any pre-Roman deposits in this country. *Helix pomatia* occurs in, and still lives near, the Roman station at Chedworth, Gloucester, and is abundant along the line of the North Downs, far removed in many localities from any known Roman settlements; but its apparent absence in the more northern city and its erroneous record as occurring there may prove of importance as a matter of distribution. I may remind our readers that Colchester native oysters have been identified among Roman remains as far afield as Gloucester.

September 10, 1905. G. S. BOULGER.

NATURAL HISTORY QUERIES.

64. Longevity of Wild Birds.—I should be much obliged if any one could refer me to a book or article in which information on this subject could be got. I should like to test the validity of conclusions to which I have been led on this point. If the following assumptions be made, viz., that a particular species of birds breed when one year old, and that on an average they bring up safely one pair of young for each pair of parent birds, and that the average length of life of the birds was eighteen months, then their numbers would neither increase nor diminish. If they brought safely up four young on an average, the other assumptions remaining the same, then when the second year came the parents would be dead, but two pairs of young would be in their place; the third year this second generation would be dead, but four pairs would have succeeded them; and so on in geometrical progression, so that when an equilibrium in numbers was attained the average length of life would be far less than eighteen months in order to maintain this equilibrium. The lives of cage-birds show that it would not be of old age that they would die, except in rare cases, and birds of prey are so ruthlessly kept down that they would not account for many deaths; so that in the vast majority of cases the birds would die a painful and lingering death from starvation or cold within eighteen months from their births or a much shorter period if, on an average, they bring up more than two young annually. In the case of birds that soon make themselves at home in cages, such as siskins, bullfinches, &c., I cannot doubt that if it were possible to give them their choice, they would prefer a comparatively long life in a cage, with abundance of food and shelter and the companionship of man, which they evidently enjoy, to the early and painful death, which would in most cases be their lot if left in a wild state, supposing my assumptions and the reasoning founded on them be correct.

Keith, Banffshire. ALEX. THURBURN.

SELBORNE SOCIETY NOTICES.

[NOTE.—ALL ANNOUNCEMENTS WITH REGARD TO FUTURE MEETINGS OF THE CENTRAL SOCIETY OR BRANCHES WILL BE FOUND TOGETHER AT THE END OF THESE NOTICES.]

Objects of the Society.—To promote the study of Natural History. To preserve from needless destruction such wild animals and plants as are harmless, beautiful, or rare. To discourage the wearing and use for ornament of: (1) The skins and furs of such animals as are in danger of being exterminated; (2) the skins and plumage of such birds as are not domesticated. To protect places and objects of natural beauty or antiquarian interest from ill-treatment or destruction. To afford facilities for combined effort in promoting any of the above or kindred objects.

New Members.—*Central Society.*—Mrs. Briggs, Cheshire; C. W. Cooke, Esq., F.R.H.S., Walham Green; J. H. Nelson Curtis, Esq., Sutton; Cecil Davis, Esq., Wandsworth; Miss Kate M. Hall, Stepney Borough Museum; Peter Lawson, Esq., F.R.M.S., L.C.C., Fulham; Richard Lewis, Esq., F.R.M.S., Ealing; Major H. E. Poole, V.D., Willesden Green; Edmund Witheridge, Esq., Kingston Hill; Frederick Winkfield, Esq., Fulham; Miss Laura Yates, Hamilton Terrace,

Birmingham Branch.—William Francis Wicmann, Esq., Erdington.

Croydon Branch.—Miss M. Latham and Miss D. Latham, Croydon.

Hampstead Branch.—Mrs. Batley, Hampstead; Leonard H. Roberts, Esq., Willesden Lane.

Subscriptions.—The Council has pleasure in acknowledging subscriptions of greater value than 5s. from the following Members: A. F. Currey, Esq., £1 10s.; Mrs. Currey, £1 10s.; J. H. Bowman, Esq., £1; S. G. Huntley, Esq., 10s.; Johnston Macfie, Esq., 10s.; Mark Pole, Esq., 10s.; F. G. Stewart, Esq., 10s.; also a contribution of £1 1s. to the Leaflet Fund, kindly sent by the Committee of the Birmingham Branch.

Excursions Committee.—At the first meeting of the Excursions Committee, held on October 24, Mrs. Percy Myles was elected Chairman and Mr. Hubert H. Poole Honorary Secretary of the Committee.

Library.—The Honorary Librarian will attend at 20, Hanover Square, from 6 p.m. to 6.30 p.m., on the evenings when the Publications Committee meet (at present on the second Monday in the month), for the purpose of issuing books to Members.

The Honorary Librarian has pleasure in announcing the following additions to the Library: "Natural History of Selborne," Blyth's edition, 1836, kindly presented by E. Nash, Esq. "School Gardening," by W. E. Watkins and A. Sowman, kindly presented by the Editor.

NEWS FROM THE BRANCHES.

Ealing.—The Committee of the Ealing Branch has pleasure in acknowledging a subscription of greater value than 5s. from the following Member: A. A. George, Esq., 10s.

FIELD CLUB RAMBLES.

September 30.—Upwards of fifty, including a large contingent from the Hampstead Branch, assembled on this afternoon, under the leadership of the Editor, to examine some of the trees of Richmond Park. The route taken was from the Richmond (Star and Garter) Gate, past Pembroke Lodge, to Ham Cross, and thence, past Pond Slade and between the Pen Ponds back to the starting point. Nothing in the nature of a formal lecture was attempted; but the many species of trees available were pointed out and briefly commented upon as we passed them. The Lindens near the favourite seat of the poet Thomson, the fine Horse Chestnuts and Spanish Chestnuts, the latter with furrowed and twisted bark, the aged Thorns, the specimens of *Crataegus coccinea*, and, especially, the fine spear Hornbeams were pointed out: we rested awhile under the largest Oak in the Park still in full vigour; and Mr. Pullman, the Superintendent of the Park, recalled the fact that it was owing to the protest of the formerly existing local branch of the Selborne Society that some of the Horse Chestnuts were not planted in a formal avenue. A fine Mossy-Cup Oak and a plantation of Dogwood, recently made by Mr. Pullman, were among the chief other trees examined in the Park, where attention was also directed to the recently introduced system of recording the dates of the plantations on iron tablets. The Fallow and Red Deer, Herons overhead, and various water-fowl on the Ponds, lent variety to the afternoon's observations; and the light was fast fading as we passed through the beautiful Terrace Gardens, with their fine Cedar, Catalpa and other trees, to our tea in the town.

FORTHCOMING EVENTS.

Council and Committee Meetings.

Monday, November 13.—Publications Committee at 5.30 p.m.; General Purposes Committee at 6.30 p.m.

Tuesday, November 28.—Council Meeting at 5.30 p.m.; Excursions Committee after the Council Meeting.

WINTER MEETINGS OF THE SOCIETY.

Saturday, November 11.—Natural History Museum, Cromwell Road, S.W. Meet in the Central Hall at 2.15. Professor G. S. Boulger, F.L.S., F.G.S., will give a demonstration.

Saturday, November 18.—Visit to the Hall of the Salters' Company, St. Swithin's Lane, E.C. Assemble at 3 p.m.
Guide, S. W. Luard, Esq., Clerk to the Company.

Saturday, November 25.—Visit to a City Fur and Skin Warehouse. Meet at 33, Queen Street, Cheapside, at 2 p.m. Mr. C. M. Mühlberg will give a demonstration on "Zoology in Every-day Life."

Saturday, December 9.—Natural History Museum, Cromwell Road, S.W. Meet in Central Hall at 2.15 for 2.30. Dr. C. W. Andrews will give a demonstration on Fossil Mammals.

H. H. POOLE,
Hon. Sec. Excursions Committee.

Annual Dinner.—For several reasons it has been decided not to arrange a dinner this year.

ANSWERS TO CORRESPONDENTS.

Dr. John C. Thorowgood.—*Xylaria polymorpha*, Grev., a pyrenomycetous fungus.

Ida M. Roper.—*Clavaria inequalis*, Fl. Dan., one of the Hymenomycetes.

M. G. B.—The "Hazel-hen," *Tetrastes bonasia*, is a grouse, but little larger than the common partridge. It enjoys a wide range, extending over Europe and North and Central Asia. Pine forests, birch woods and hazel copses in the wildest mountain districts form its habitat. Large numbers of Hazel-hens are captured yearly in Sweden, and it is from this source that our market is supplied. The name Hazel-*hen* is, I suppose, on all fours with Moor-*hen*, Water-*hen*, Heath-*hen*, and *Hen*-harrier.

W. P. PYCRAFT.

1. All communications for NATURE NOTES must be authenticated with name and address, not necessarily for publication.

2. The return of an unaccepted contribution can only be guaranteed when it is accompanied by a stamped and addressed envelope. We cannot undertake to name specimens privately, to return them, or to reply to questions by letter.

3. All communications for any number must be in the Editor's hands by the 10th of the preceding month.

4. Communications for NATURE NOTES, books for review, specimens for naming, &c., should be addressed to the Editor, PROFESSOR BOULGER, F.L.S., F.G.S., 11, Onslow Road, Richmond, Surrey.

5. For the supply of the Magazine to others than Members, or for back numbers (except in the case of new Members), address the publishers, with stamps at the rate of 2½d. per number, Messrs. JOHN BALE, SONS AND DANIELSSON, Ltd., 83-91, Great Titchfield Street, London, W.

6. Letters connected with the business of the Society, subscriptions, and applications for membership, should be sent to the local Honorary Secretary, or to the Honorary General Secretary of the Society, WILFRED MARK WEBB, F.L.S., at 20, Hanover Square, London, W.

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Nature Notes:
The Selborne Society's Magazine.

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SELBORNIANA.

Gilbert White's Letters.—Mr. Andrew Pears has purchased the twenty-five letters written by Gilbert White to his brother John, which were recently mentioned in these notes. They will be preserved at "The Wakes," and Mr. Pears' prompt action has happily prevented them from going to America. A statement which has appeared in the press to the effect that a number of unpublished letters of Gilbert White have now become available and will shortly be incorporated in a new book, is unfortunately not correct. It is based on Mr. Pears' acquisitions, which have, however, all been published in the "Life and Letters of Gilbert White."

The Saving of Hindhead.—The securing for the public of 700 acres of the most beautiful part of Surrey by the spirited action of a local committee of the Commons Preservation Society, and especially of Mrs. Thackeray Turner, has naturally evoked many enthusiastic articles in the press. The area purchased was the wastes of the manor of Witley, including Gibbet Hill and the Devil's Punch-bowl, and the price paid was less than £4,000, most of which, we understand, has been already subscribed. *The Times* says:—

"Hindhead is perhaps the best known of all the Surrey hills. Rising to close upon 900 feet, it commands a wide prospect on all sides. To the east lies the weald of Surrey and Sussex, bordered on the north by the greensand ridges, of which Leith Hill is the culminating point, and by the North Downs. To the north-west and west the Aldershot country and the rolling chalk hills of Hampshire, diversified by such features as Crooksbury, Farnham Castle, the Frensham Ponds, and Selborne Hanger; while to the south are the South Downs with the nearer heights of Marley and Blackdown. The hill falls steeply on the Witley side, and the thick growth of heather dotted with fine hollies breaks away into woods and coppices. Almost over the summit—now marked by Sir William Erle's quaint cross, but from the ghastly burden it once bore still called Gibbet Hill—sweeps in a long curve the Portsmouth Road, while deep below lies the impressive combe known as the Devil's Punch-bowl. Mr. Pepys, travelling to Portsmouth on Admiralty business, found little to admire and much to fear in the road round the Punch-bowl, and Cobbett pronounced Hindhead a God-forsaken place; even Turner's sketch gives an awesome aspect to the cloud-capped hill. But Professor Tyndall changed all this. Led by his love of alpine air Tyndall made himself a home on the highest available spot, and his example has been followed to such good purpose that Hindhead now boasts its scores of mansions, villas, and week-end cottages, its two hotels, many boarding-houses, church, and public-hall. All this building has been made possible by Parliamentary enclosures on a large scale, which took place in the middle of the last century. The

far-stretching parish of Frensham was wholly enclosed; but the parish of Witley, which comprises the Gibbet Hill and the Punch-bowl, was happily left unchanged."

A writer in *The Spectator*, who can be readily identified, speaking of his own school-days, about 1870 we guess, writes:—

"There was at that time a regular colony of old-fashioned naturalists and sportsmen in the then quiet little town of Godalming, whose houses were full of stuffed birds, their storehouses and offices also being crowded with specimens. One of these was the late Mr. Edward Newman, who in his early publication, the 'Letters of Rusticus,' gives the following genial description of a day after black grouse on the Hindhead commons now purchased and preserved: 'From time immemorial Black Grouse have inhabited Hindhead. This noble bird prefers swampy wet places; I have known a pointer, when up to his knees in water, stand at a Black Cock; but occasionally, especially towards August, the black grouse get up upon the brows of the hills, and then is the time when they are principally sought after by sportsmen. It has always been a riddle to me that Gilbert White should speak of the bird as extinct . . . . the sportsmen here kill them every year.' Two of the people whose services were generally enlisted to aid in a day in search of the game were 'broom squires' of the name of Rook, father and son, who knew to a nicety where the birds lay. The beating of the hillside by the sportsmen and the broom squires is then described, and the death of the black cock, who fell at a vast distance with one pellet through its heart from the gun of the clever old naturalist, who was also owner of a big water mill, Waring Kidd. 'Dick, the broom squire, threw up his hat and shouted "Well done, Godalming!" I shall never forget the scene, nor Dick's keen relish for such an exploit, which quite overcame his regret for the few shillings which the bird would have brought him had he shot it himself later.' The rare Dartford warbler formerly nested abundantly on these commons, but was largely killed off by some very severe winters. Snipe are plentiful in places still, and so is the fern owl in summer. Formerly, in the bottom of the Punch-bowl, where one of the beautiful streams that form the head-waters of the Wey takes its rise, the *Osmunda regalis* grew in quantities and to a great size. It was also found near the Forked Ponds on Thursley Common, and on Highdown Heath; but some years ago a great part of the *Osmunda* in the Punch-bowl had disappeared, dug up probably by gipsies and others for sale. On Witley Heath are pools and swamps abounding in rare and beautiful plants, especially the bog known as Witley Lagg, and the moors to the north of the common. Thus the purchasers of the property have preserved not only an open space of great size and singular beauty, but one which is a perfect museum of interesting plants, and a natural home of rare birds, though the black cock has disappeared finally."

Murderous Millinery.—"When the figures of the millinery slaughter-houses are counted up they are rather appalling. Ten million birds a year, it was estimated, were required to supply the women of the United States with suitable hat trimming; forty thousand terns in a single season on Cape Cod, a million bobolinks near Philadelphia in a single month, twenty thousand birds sent to New York dealers in four months from one village on Long Island. England imports between twenty-five million and thirty million birds a year. One London dealer received from the East Indies alone four hundred thousand humming birds, six thousand birds of paradise and four hundred thousand miscellaneous birds. Altogether it is estimated that between two hundred million and three hundred million birds perish each year to trim the hats of the women of the world."—*The Animals' Friend.*

NOTE.—Attention is called to the postponement of the visit to the Natural History Museum on December 9, so that members can attend the Autumn Meeting of the South-Eastern Union of Scientific Societies at the Guildhall on that day.

VICISSITUDES OF MEAN DAILY TEMPERATURE THROUGHOUT THE YEAR, &c.

By E. G. ALDRIDGE, F.G.S., F.R. Met. Soc.

(*Continued from p.* 209.)

"UNSMOOTHED" VALUES. "SMOOTHED" VALUES.

Table XII. *From Tables IX. and XI.*

December.

The value of the 1st and 2nd is 39·5°. Warmth sets in on the 3rd, and continues till the 8th, the highest, lowest, and average of these six days being 42·1 (6th), 40·4° (3rd), and 41·2°. The 6th is the warmest day of the month. From the 9th to the 12th constitutes a colder period, with a mean of 39·1°. On the 13th the temperature rises to 40·3°, and continues at 40·0° or upwards for five days, with an average of 40·3°. There is a descent from 39·4° on the 18th to 37·3° on Christmas Day, but the 21st and 22nd each show a rise above the general fall of the period. From the 26th (38·3°) to the end the temperature varies only 0·4°, and the average is 38·4°. Christmas Day is the coldest day of the month, and is only 0·3° warmer than January 12. Range, 4·8°. Mean, 39·39°.

The month opens with 40·3°. A warmer period now commences, and there is a daily rise to 41·0° on the 5th and 6th, which are December's mildest days. 40·8° occurs on the 7th. The temperature now falls to 39·5 on the 11th, after which the values increase to 40·0 on the 14th, 15th, and 16th, the middle day being fractionally the warmest. A fall now takes place until 38·0° is reached on the 24th and 25th (the coldest days). The remaining six days have nearly the same value, the average being 38·3°. The mild period near the commencement, and the cold weather of Christmas, are so well marked that the "smoothing" process has not been able to eliminate them. Range, 3·0°.

GENERAL REMARKS.

A temperature of 40° or upwards first happens on January 31, and occurs last on December 17. The first instance of 45° or upwards is on March 29; the last on November 8. 50° or upwards is first met with on April 20; it does not occur after October 19. May 21 affords the first instance of 55° or upwards, and October 1 the last. 60° or upwards is not found till June 13; it disappears from the table after

A temperature of 40° or upwards first happens on February 16, and occurs last on December 16. The first instance of 45° or upwards is on March 30; the last on November 7. 50° or upwards is encountered on May 1; it does not occur after October 17. May 21 supplies the first instance of 55° or upwards, and September 30 the last. 60° or upwards is not found till June 17; it disappears from the table after

September 7. 65° or upwards occurs only once; but the temperature of July 14 is 64·9°. The annual range is 28·2°. The mean annual value is 50·06°.

September 7. An instance of 65° is wanting. The annual range is 26·6°. There is practically no difference between the monthly means of the two sets of temperatures.

Additional Remarks.

It is interesting to observe that the lowest daily maximum is 16·7°. This occurs on January 8, 1841. The latest instance of a maximum of 32° or below in the Spring is found on March 16, 1845 (27·6°); but 32·9° takes place on the 25th in 1879. The very low maximum of 36·3° is recorded against April 19, 1849. The earliest instance of a maximum of 32° or below in the Autumn occurs on November 16, 1887 (29·2°). The highest daily minimum is 66·1°. This takes place on July 26, 1872. The first instance of a minimum of 60° or upwards in the Spring is found on May 24, 1847 (61·3°); the last in the Autumn is 62·0° on September 24, 1859. 59·5° occurs in the same year as late as October 7. Illustrative of the so-called "freaks of Nature" ("freaks" in this connection is wholly unscientific), I may add that the mean temperature of July 11, 1888*, is but 49·0°—about the same as that of April 30* or that of October 20,* on the average of fifty years. The mean of New Year's Day, 1883,* is 53·1°—about the same as that of May 17,* on the average of the half-century. As to maximum temperatures, 53·9° is found on July 12, 1888, and 57·0° on January 28, 1843. (At Aberdeen, however, in January, 1898, occurred a maximum two degrees higher than the last, and at Wick one which was three degrees higher). The columns of minimum temperatures show that 35·6° is recorded against June 1, 1869, and 38·7° against July 19, 1863; while 51·7° takes place on New Year's Day, 1883.

REVIEWS AND EXCHANGES.

Beasties Courageous. By Douglas English, B.A. With photogravure frontispiece and 100 other illustrations from photographs by the author. S. H Bousfield and Co. Price 5s. net.

So many are now devoting themselves to bird-photography that Mr. English certainly does well in largely specialising his great skill in the direction of "fur" rather than "feather." True, we have in this volume eighteen unsurpassed pictures of swans; and, as shown by two out of the three illustrations which Messrs. Bousfield allow us to reproduce, he can secure admirable results with amphibians; but it is in dealing with "rats and mice and such small deer" that he is unrivalled. The number of these illustrations makes the volume a very cheap one. Though we have spoken of the illustations first, Mr. English's stories exhibit considerable narrative power. They are not all, perhaps, adapted for children, but then children's books nowadays are mostly bought by their elders mainly with a view to their own edification.

* The mean temperatures of these dates appear in Table I.: they have been derived from a large number of daily observations.

THE MARTEN (*Martes sylvatica*).
(From "Beasties Courageous." By kind permission of Messrs. Bousfield and Co.).

TOAD SWIMMING. (From "Beasties Courageous." By kind permission of Messrs. Bousfield and Co.)

EDIBLE FROG (*Rana esculenta*). (From "Beasties Courageous." By kind permission of Messrs. Bousfield and Co.)

Nature through the Microscope and Camera. By Richard Kerr, F.G.S. With 65 photo-micrographs by Arthur E. Smith. Religious Tract Society. Price 6s. net.

We have all of us looked through microscopes at diatoms, foraminifera, the radulæ of mollusks, insects' eyes, plant cells or blood corpuscles; but here we have what has hitherto been a transitory glance preserved for us by the camera. The sixty-five subjects are selected from human histology, flowering-plants and the other classes of "common objects of the microscope" just mentioned; and the

DODDER ON CLOVER. × 36. (From "Nature through the Microscope and Camera." By kind permission of the Religious Tract Society.)

photographs, which have not been re-touched, are perfect specimens of reproduction, the scale of magnification being stated on each. Short descriptions are given of each object, and Mr. Smith gives an illustrated account of the apparatus employed.

Received: *The Plant World* for September; *Bird Lore* for September and October; *The American Botanist* and *The Victorian Naturalist* for October; *Our Animal Friends* for October and November; and *The Naturalist*, *The Irish Naturalist*, *Nature-Study*, *The Animal's Friend*, *The Animal World*, *The Humanitarian*, *The Agricultural Economist*, *The Parents' Review*, and *The Estate Magazine* for November.

NATURAL HISTORY NOTES.

307. Birds in Field and Garden.—Under this heading, Advocatus Diaboli, asks for information from lands where the destruction of useful birds has been allowed to go on till it was too late. I venture to state that in my opinion the scarcity of small birds in France and Switzerland is very much exaggerated. I was intimately acquainted with Brittany and Normandy, and began taking notes as early as 1878, on birds observed during long walks through these provinces. Blackbirds, thrushes, chaffinches and goldfinches were especially abundant. A few Frenchmen shoot the two former species for the pot, but this reprehensible practice is also very much in vogue in the south of England. When considering the scarcity of small birds abroad, we must take into account that the large tracts of forest on the Continent with scanty undergrowth are inimical to bird life; as to Mid and South France, I am not in a position to speak. I once made a stay of two months in the Austrian Tyrol, and on the eve of an expedition up one of the mountains, an old English resident of twenty years' standing informed me that the Continental sportsman had destroyed most of the small birds in Tyrol; but shortly after starting next morning, in a pine forest, we were rejoiced to come across two flocks of crossbills, numerous tits, &c. We made many excursions after this and saw a fair amount of bird life, including some rarities.

In NATURE NOTES (*vide* July, page 135), I described how the starling did some damage to sprouting wheat, and was taken to task in consequence by Mr. Daubeny, who stated that I had given the starling too bad a character, but I only told the truth, and he was quite under a misapprehension when he thought I intended to convey the idea that the starling did more harm than good. When dead birds come into my possession I always dissect them and send the stomach contents to experts for identification, and in this way am quite aware how beneficial the starling is to agriculture. Mr. Daubeny asks what fruit besides cherries starlings eat. I can tell him they eat rasps and figs, and sometimes peck into pears.

In Denmark, it may interest some readers of NATURE NOTES to learn, that starlings are only allowed to be shot from July 1 to August 19.

In the *Field* a few years ago a correspondent answering a note of mine anent the food of the starling, remarked that skylarks had completely ruined an eight-acre wheat field, but in my own experience, on only one occasion have I found them doing damage to wheat, when the stomachs of two larks shot near some offending starlings contained the whitish pulp derived from wheat grains.

Southsea, Hants. J. E. H. KELSO.

308. Longevity of Wild Birds.—With reference to Mr. Thorburn's query in our last number, Mr. J. E. Harting kindly refers to an article by Mr. J. H. Gurney in *The Ibis* for January, 1899.—ED. *N.N.*

309. House Martins and Sparrows.—This spring a pair of house martins built their nest under the eaves of Kimberley House, the residence of Mr. Josiah Richardson, Barmby Moor, Yorkshire. A few days ago the old nest was removed, when it was noticed that the opening was closed and inside was found a dead sparrow. One of the workmen informs us that he noticed with interest (in the nesting season) great excitement amongst the martins, and wondered why a number of them combined to seal up the door of the nest. The dead body of the poor usurper explains their combined action to punish with death the foe who refused to be ejected. I have often heard similar stories, but have not until now been able to verify them.

W. D. WOOD REES.

310. "Belated" Martins.—On November 7 a solitary house martin might be seen skimming over our village. An old parishioner, who years ago used to spend his winters in a barn thrashing corn with a flail, tells me that he remembers a pair of swallows or martins making their lodging there until spring, taking occasional flights when the weather was fine. Could this be correct? The old man's idea was that they lived on the gnats which on fine days take a turn out, and upon the spiders which abounded in the barn roof.

W. D. WOOD REES,
Hon. Sec. East Riding.

311. **Honey-Dew.**—Mr. Hastie's assertions on Honey-Dew in No. 304 are nearly as sweeping and reckless as those he entertained us with in NATURE NOTES on Meteorites a year or so ago. He says "I am wrong if I mean to say honey-dew comes from a fir tree, a laurel, or a cabbage." If he will read any work on the subject he will find that honey-dew is the excretion of aphis; and that fir trees are much infested by that insect. No doubt he has never seen it there. There is no better way of discovering wasps a long time before the fruit season than by watching certain firs, the fir aphis having special attractions for them. Bees, wasps, and other insects, may often be seen feasting on the honey-dew from aphis on the tender leaves of the laurel. This too seems to have escaped his notice. As Mr. Hastie tells me that honey-dew does not come from the cabbage, I am led to suppose that vegetable gardening is not in his line. When, however, he declares that honey-dew is "certainly not found on the beech," I give him up as hopeless, and wonder what he does with his eyes.

November, 1905. EDMUND THOS. DAUBENY.

312. Mr. J. E. Harting kindly calls attention to the following note on this subject in his edition of White's "Selborne" (1875), p. 310. Mr. Curtis has shown (*Trans. Linn. Soc.*, vol. vi.) "that this substance is the excrement of aphides. In order to convince a friend who was sceptical as to this fact, Mr. Rennie placed a sheet of writing paper under a branch where some aphides were feeding, and over the leaves below them which he previously cleaned from honey-dew. The result, as he anticipated, was that the paper was soon covered with honey-dew, while the leaves below it were free."

NATURAL HISTORY QUERIES.

65. **Rabbits.**—Numbers of rabbits are caught when the corn is cut. On these occasions the harvesters shout at the rabbits as they bolt before the reaping machine in order to bewilder them among the newly-cut corn. When pursued the poor animals often shriek out from pure terror; and, I am told, by so doing compass their own death. They say here that shrieking always causes rupture of the rabbits' stomach; or, as they put it, "bursts the paunch." If this be true, the very fact of being pursued by a stoat must be fatal to a rabbit, whether caught or not, as it always cries out. Has this been noticed by others in the rabbit or any other animal?

EDMUND THOS. DAUBENY.

66. **Frog Attacks Fish.**—While stocking a pond with coarse fish a frog sharply attacked a rather languid roach, which, however, swam off. Since then several roach and large sticklebacks have died, some with red marks on the belly, as if bitten. Can any of your readers throw light on the matter? The frogs are numerous. There are no jack or perch. J. A. STRONG.

Langhorne, Shepton Mallet.

SELBORNE SOCIETY NOTICES.

[NOTE.—ALL ANNOUNCEMENTS WITH REGARD TO FUTURE MEETINGS OF THE CENTRAL SOCIETY OR BRANCHES WILL BE FOUND TOGETHER AT THE END OF THESE NOTICES.]

Objects of the Society.—To promote the study of Natural History. To preserve from needless destruction such wild animals and plants as are harmless, beautiful, or rare. To discourage the wearing and use for ornament of: (1) The skins and furs of such animals as are in danger of being exterminated; (2) the skins and plumage of such birds as are not domesticated. To protect places and objects of natural beauty or antiquarian interest from ill-treatment or destruction. To afford facilities for combined effort in promoting any of the above or kindred objects.

New Members.—*Central Society.*—William E. Avery, Esq., Broxbourne; Stanley C. Bailey, Esq., Ewell; John Francis Bird, Esq., Tintern; C. H. Cox, Esq., Tottenham; Mrs. Cruikshank, Barnet; C. E. Fagan, Esq., British

Museum (Natural History); The Hon. Gladys Graham-Murray, Dunkeld; H. Norman Gray, Esq., City of London College; Dr. Greenwood, Barnet; Mrs. W. J. Anstey Greet, Weybridge; E. M. Mode, Esq., Bombay.

Hampstead Branch.—Miss Myra Barr, Holland Park; Miss Elsie Owen; Miss Scull, Hampstead.

Donation.—The Council has pleasure in acknowledging a donation of 5s. from Stanley E. Bailey, Esq.; Mrs. W. J. Anstey Greet, 5s.

Library.—The Honorary Librarian will attend at 20, Hanover Square, from 6 p.m. to 6.30 p.m., on the evenings when the Publications Committee meet (at present on the second Monday in the month), for the purpose of issuing books to Members.

General Purposes Committee.—The Council decided on October 24 that its meetings should be held in future once in two months. As a result of this action a General Purposes Committee was appointed to meet, if necessary, in the intervals. It consists of the Rev. Ashington Bullen (*ex officio*), Mrs. Percy Myles, Dr. Dudley Buxton, Mr. Hailes, Mr. Poole, and Mr. Webb.

NEWS FROM THE BRANCHES AND AFFILIATED SOCIETIES.

Birmingham and Midland.—On Tuesday, November 14, a lecture was given on "Birds and their Ways," by Miss E. H. Pitcairn, in the Large Lecture Theatre of the Midland Institute. Between six and seven hundred children from the primary schools of the city were present. The lecture, which was illustrated with some beautiful lantern views, was interspersed with a number of anecdotes of bird life, which were much appreciated by the children, who heartily applauded Miss Pitcairn at the close of her lecture. Mr. T. H. Russell presided, and said a few words dealing with the special objects of the Selborne Society.

Clapton (Lower Lea Valley).—The opening meeting of the session, 1905-6, was held on November 18, at Sigdon Road School, Hackney Downs. There was a very satisfactory attendance of members and friends to hear a lecture on "Pompeii," by Mrs. L. Douglas Wilson. The lecture was illustrated by more than eighty most interesting slides, and was greatly appreciated by the audience, who accorded Mrs. Wilson a hearty vote of thanks.

Ealing.—The Committee of the Ealing Branch has pleasure in acknowledging subscriptions of greater valuc than 5s. from the following Members: Mrs. Arthur Hill, £1 1s.; F. H. Dangar, Esq., 10s.

North Middlesex Junior.—On Saturday, October 28, a tea party and social evening was held by the children's section at Brunswick Hall, kindly lent by Mr. J. L. Wood. Those present numbered over forty. The cost was defrayed by adherents of the Branch and Associates, the arrangements being under the direction of Miss E. M. Grint, Honorary Secretary of the Section. A very large number of exhibits were made which would have done credit to any museum. These included local lepidoptera, collections of water insects, British hawk-moths, British and exotic marine shells, land and freshwater shells, a case illustrating common garden insects, larvæ (preserved of) butterflies and moths, as well as collections of fossils. Mr. C. M. Hall, M.M.S., in his opening address reviewed the history of the Selborne Society and its objects, the institution and formation of Junior Branches, and the North Middlesex Branch in particular. A most interesting part of the programme was the distribution of prizes which were handed to the recipients by Miss Grace M. Grint. Votes of thanks to the donors of the prizes and to those who had subscribed towards the cost of the evening's enjoyment, were proposed and carried. A vote of thanks to Mr. Hall for presiding, and to Miss Grint and her ladies' Committee for making the meeting such a decided success, brought the proceedings to a close.

North Wilts Field and Camera Club.—On Saturday, October 21, the Club had the pleasure of hearing Mrs. L. Douglas Wilson lecture on "Pompeii." The Chair was taken by Mr. G. Avenell, Vice-President. Mrs. Wilson first gave a brief outline of the history of Pompeii, the pleasant sunny resort of wealthy Romans. To-day the excavations are carried on most carefully, the aim being to restore everything to its condition prior to the eruption of

79 A.D. Formerly many objects were removed to the Museum of Pompeii. The narrow stony streets had very high pavements, and were crossed by high stepping-stones on account of the sudden heavy rains. Among more recent discoveries have been the baths, as elaborate as most Roman baths, with hollow floors for heating the hot rooms. The theatre adjoined the amphitheatre, where gladiatorial contests took place. One was in progress when the eruption occurred. The shops were small and mean, but the characteristic signs hung out were most striking. The lecture was illustrated by many excellent lantern slides. At the conclusion a hearty vote of thanks was accorded to Mrs. Douglas Wilson.

WINTER MEETINGS OF THE SOCIETY.

November 11.—Over thirty members assembled at the Natural History Museum for the first meeting of our winter session. Owing to the unavoidable absence through illness of Prof. Boulger, Dr. C. W. Andrews, at very short notice, kindly allowed us to join a party from the Battersea Field Club, which he was conducting through the Palæontological Department, where he gave a most interesting address on Fossil Reptiles. Dr. Andrews most lucidly explained the difference in structure between the eleven great orders of the Reptilia, and showed the gradual development of aërial and aquatic forms from the terrestrial. It was pointed out that the legendary dragons were probably late-surviving specimens of some of the Pterosauria or Winged Lizards, an order which is now quite extinct; while the idea of the sea-serpent possibly originated in survivals of the Mososauria. One of the most complete series exhibited is that of the Plesiosauria, of which so many specimens have been secured from the Oxford Clay, near Peterborough, by Mr. Leeds, that the development of the reptile can be traced from infancy to the adult stage. Mention must also be made of the fine skeleton of *Pariasaurus bainii* found in Cape Colony, by Prof. H. C. Seeley, which shows the immense development of the limb bones, a special clavicle, and an opening for the medial eye. Another interesting exhibit is a cast of the giant tortoise, *Testudo atlas*, from the Siwalik Hills of India. Finally, we were shown the recent addition, *Diplodocus carnegii*, which, although sixty feet in length, had a brain no larger than a walnut, its chief nerve-centre being in the lumbar vertebræ. The head is very small, the neck twenty feet long, and of peculiar structure, strong, light and allowing very free movement; while the tail is some twenty-five feet in length, diminishing to a whip-lash at the end. An official of the Battersea Field Club moved a hearty vote of thanks to Dr. Andrews, which was seconded by the Hon. Secretary of our Excursions Committee, who also voiced the thanks of our Society to the Battersea Field Club for their courtesy in concurring with Dr. Andrews in permitting us to join their party.

November 20.—A cordial welcome awaited the eighty Selbornians who visited Salters' Hall, where Mr. S. W. Luard, Clerk to the Company, was in waiting to offer the necessary explanations. Under his guidance a tour of the premises was made. The present is the fifth hall that the Company has occupied. In Bread Street were the first two, destroyed by fire, and in 1641 the Salters migrated to the present site in St. Swithin's Lane, near the London Stone, which has since remained their home with three successive halls to house them. The existing premises are both spacious and imposing, and were created in the twenties of the last century. In the Court room a paper of great interest and research was read by Mr. Luard. In this he showed the Salters to have had a semi-religious origin, as was indeed the case with several of the City Guilds. The Salters obtained a licence from Richard II., in 1394, and a formal charter of incorporation from Elizabeth. Charles II. withdrew their rights, while William III. restored them. James I. induced the Company to invest large sums in estates in Ulster, but in recent years these have been disposed of to the tenants under one of the Land Acts. Details of the Salters' Almshouses at Watford and Maidenhead were furnished. They had their origin in bequests in the 15th and 16th centuries. The Selbornians afterwards partook of the hospitality for which the Salters have always been remarkable, and on the conclusion of tea the heartiest thanks were awarded to the Company for their reception, and to Mr. Luard for his able address.

FORTHCOMING EVENTS.

COUNCIL AND COMMITTEE MEETINGS.

Monday, December 11.—Publications Committee at 5.30 p.m.
Monday, January 8.—Publications Committee, 5.30 p.m.
Tuesday, January 23.—Council Meeting at 5.30 p.m.

WINTER MEETINGS OF THE SOCIETY.

Saturday, December 9.—The meeting at the Natural History Museum arranged for this day has been postponed, so that members may attend the Autumn Meeting of the South-Eastern Union of Scientific Societies (to which the Selborne Society is affiliated). It will take the form of a visit to the City of London, Guildhall, Library and Museum, under the direction of C. Welch, Esq., F.S.A., the Librarian. Assemble at the entrance porch of the Guildhall at 2.45 p.m. Tea will be arranged for in one of the rooms, and those requiring tickets must write at once to Mr. H. Norman Gray, 131, Earlham Grove, Forest Gate, E., enclosing a remittance of 1s. each. After December 7 the charge for tea tickets will be 1s. 6d. each.

As this is a new departure on the part of the Union, it is hoped that members of the Selborne Society will make a point of being present.

Clapton Branch.—The next meeting of the Branch will be held on December 16, when Mr. R. Marshman Wattson will give a lecture on "Stones of English History" (second series), with Lantern Illustrations.

All communications with regard to the winter meetings of the Society should be addressed to Mr. H. H. Poole, *Honorary Secretary of the Excursions Committee*, at 20, Hanover Square, W.

ANSWERS TO CORRESPONDENTS.

R. Rozelaar.—A dead body or skeleton of a plant or an animal remains vegetable or animal respectively as long as it retains its organic form. When disintegrated it becomes mineral matter. The direct answer to your question, therefore, depends on the character of the soil in which burial took place; but I should expect animal form to be still recognisable.

J. B.—Evelyn's "Sylva" is not now in print in any edition; but can be obtained second-hand. Hunter's edition is the best.

A. M. Greenwood.—*Aristolochia clematitis* might be obtained at Messrs. Ware's, Feltham, Middlesex. It is hardy. The two other species are not in any nurserymen's catalogues which we have at hand. We will write more in detail.

1. All communications for NATURE NOTES must be authenticated with name and address, not necessarily for publication.

2. The return of an unaccepted contribution can only be guaranteed when it is accompanied by a stamped and addressed envelope. We cannot undertake to name specimens privately, to return them, or to reply to questions by letter.

3. All communications for any number must be in the Editor's hands by the 10th of the preceding month.

4. Communications for NATURE NOTES, books for review, specimens for naming, &c., should be addressed to the Editor, PROFESSOR BOULGER, F.L.S., F.G.S., 11, Onslow Road, Richmond, Surrey.

5. For the supply of the Magazine to others than Members, or for back numbers (except in the case of new Members), address the publishers, with stamps at the rate of 2½d. per number, Messrs. JOHN BALE, SONS AND DANIELSSON, Ltd., 83-91, Great Titchfield Street, London, W.

6. Letters connected with the business of the Society, subscriptions, and applications for membership, should be sent to the local Honorary Secretary, or to the Honorary General Secretary of the Society, WILFRED MARK WEBB, F.L.S., at 20, Hanover Square, London, W.

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